

# Book of Abstract

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30° Congresso dell' Associazione Italiana di Psicologia

A cura di Filippo Gambarota, Massimo Grassi e Silvia Salcuni

Prima edizione 2022 Padova University Press

Titolo originale: Book of Abstract. 30° Congresso dell'Associazione Italiana di Psicologia

© 2022 Padova University Press  
Università degli Studi di Padova  
via 8 Febbraio 2, Padova  
www.padovauniversitypress.it

Progetto grafico: Padova University Press  
Impaginazione: Padova University Press

ISBN 978-88-6938-316-8



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Interdisciplinare

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# INVITED TALK

# THE PSYCHOLOGY OF CONSPIRACY THEORIES

*Karen Douglas (School of Psychology, University of Kent, UK)*

Conspiracy theories are abundant in social and political discourse and have serious consequences for individuals, groups and societies. However, psychological scientists have only started paying them close attention in the past 20 years. In this talk, I will underscore the importance of conspiracy theories as a topic of research in psychology. I will overview the literature on the psychology of conspiracy theories, using examples from my own research. I will showcase what psychologists know about why people believe in conspiracy theories, what their consequences are, and why people share them.



# CLINICAL NEUROSCIENCE AND THE HEART- BRAIN AXIS

*Sarah Garfinkel (Institute of Cognitive Neuroscience, University College London, UK)*

Cognitive and emotional processes are shaped by the dynamic integration of brain and body. A major channel of interoceptive information comes from the heart, where phasic signals are conveyed to the brain to indicate how fast and strong the heart is beating. This talk will detail how cardiac afferent signals can interact with neuronal mechanisms to alter emotion processing. This interoceptive channel is disrupted in distinct ways in schizophrenia, autism and anxiety; specific interoceptive disturbances may contribute to our understanding of symptoms in these clinical conditions. The discrete cardiac effects on emotion and cognition have broad relevance to clinical neuroscience, with implications for peripheral treatment targets and behavioural interventions focused on the heart.

# HOW TRAUMA IN CHILDHOOD HAS LONG-TERM IMPACTS - A DISCUSSION OF PSYCHOLOGICAL MECHANISMS

*Antonia Bifulco (Middlesex University London, UK)*

There is now substantial research to show that childhood adversity has negative impacts on individuals vulnerability and clinical disorder throughout their lifespan. Such childhood adversity includes a range of experiences, not only neglect or abuse, but also domestic violence or parental illness or criminality. Some of these experiences constitute direct trauma exposure for the child – for example being the victim of severe sexual or physical abuse. Others involve secondary trauma for example witnessing a parent being attacked. Differentiating these from other types of harm (such as neglect) or social deprivation (such as father in prison) can be important for both clinical intervention and research understanding. Providing operational definitions of types of childhood trauma exposure and whether these are directed to the child or others can allow for assessing trauma ‘dosage’ which can aid prediction of future clinical disorder. These can include PTSD but also emotional disorders including depression and self-harm. Clinical disorder typically occurs from adolescence but then can recur throughout life mediated by psychosocial vulnerabilities. These vulnerabilities include attachment difficulties, poorer emotion regulation and lowered self-esteem. Evidence of intergenerational transmission of risk from parent’s childhood trauma can also occur through the vulnerabilities expressed in family life which adversely influence parenting. However, such transmission could be also be viewed in terms of trauma ‘witnessing’ or secondary trauma when the affected parent is seen by the child as both ‘frightened and frightening’ when re-living their earlier trauma. Definitions of such witnessing, and secondary trauma require further clarification. The presentation will discuss the definitions and reach of trauma exposure and witnessing; with discussion of mechanisms of dose-effects, specificity effects and mediation. Advantages of intensive interview measures of childhood trauma include aiding the development of research models and aiding clinical approaches in understanding trauma experience and impact.

# IMPORTANT LESSONS FOR ALL CLINICIANS FROM 30 YEARS OF RESEARCH AND PRACTICE ON THERAPEUTIC ASSESSMENT

*Stephen Finn (University of Texas, USA)*

In 1992, the first study was published showing that a brief, two-session Therapeutic Assessment using only the MMPI-2 produced a significant drop in symptomatology and increase in self-esteem in 32 college students seeking psychological services, as compared to a similar group who received only supportive psychotherapy. Since that time, over 40 studies have been published on Collaborative/Therapeutic Assessment, involving many other tests, and much has been learned about how to make even a brief psychological assessment a potent therapeutic experience for clients. Perhaps even more important, however, are the lessons that have emerged from this research about how to make any psychological intervention effective, and what the active ingredients are that lead to transformations in clients in short periods of time. In his talk, Dr. Finn will focus in on these general lessons for clinicians from the research on C/TA. He will highlight: 1) the key elements for forming a strong therapeutic alliance with difficult-to-treat clients, 2) the importance of being attuned to and addressing clients' shame, 3) how emotion-focused interventions produce the biggest therapeutic change, 4) how scaffolding on the part of clinicians helps clients build a stronger, more accurate sense of self, 5) the importance of being attuned to disruptions in our relationship with clients and of knowing how to repair, and 6) how openness on the part of clinicians helps clients feel respected and held.

# PROTECTING AND PROMOTING WORKER WELL-BEING THROUGH ORGANISATIONAL INTERVENTIONS

*Karina Nielsen (Institute of Work Psychology, Sheffield University Management School, University of Sheffield, UK)*

In this presentation, I will focus on how we can improve employee wellbeing through making changes to work policies, practices and procedures. The European Framework Directive 89/391/EEC on occupational safety and health (OSH) introduced employers' general obligations to ensure employees' health by addressing all types of risk, including work characteristics, in a preventive manner. This Directive led to the development of follow-up policies, such as the European Framework Agreement on Work-related Stress in 2004, which emphasizes assessment and management of work characteristics and which has been implemented by the European countries in different ways. Despite the EU framework, findings from the third wave of the European Survey of Enterprises on New and Emerging Risks showed that 21% of companies in the EU28 perceived psychosocial risks to be more challenging to manage than other Occupational Health and Safety (OSH) risks. There is therefore a need to focus on the "how to" organisational interventions. The Italian Workers Compensation Authority (INAIL) also has a focus on assessing and managing psychosocial risks. In its first stages, the focus of the INAIL methodology was to assess psychosocial risks. In my presentation, I will synthesise the latest research on how to design and implement organisational interventions and I will provide examples of practical tools, which consultants and organisations may find help in the development of organisational interventions.

# **PUBBLICARE OGGI: OPEN ACCESS E OPEN SCIENCE**

*Proponente: Terri Mannarini (Università del Salento)*

*Partecipano: Terri Mannarini (Università del Salento), Massimo Grassi (Università degli Studi di Padova), Loris Vezzali (Università degli Studi di Modena e Reggio Emilia), Maria Assunta Zanetti (Università di Pavia), Guendalina Graffigna (Università Cattolica del Sacro Cuore)*

## **“IL COUNSELLING PSICOLOGICO NEGLI ATENEI: SITUAZIONE ATTUALE E PROSPETTIVE FUTURE”**

*Proponente: Angela Costabile (Dipartimento di Culture, Educazione e Società, Università della Calabria)*

*Partecipano: Pierpaolo Limone (Università degli Studi di Foggia), Laura Parolin (CNOP), Luca Pezzullo (Ordine degli Psicologi del Veneto), Paola Bastianoni (Università degli Studi di Ferrara), Piero Porcelli (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Annamaria Speranza (Sapienza Università di Roma)*

## **“1992-2022: GLI ULTIMI TRENT’ANNI DI UNA LUNGA STORIA”**

*Proponente: Santo Di Nuovo (Dipartimento di Scienze della Formazione, Università di Catania)*

*Partecipano: Santo Di Nuovo (Dipartimento di Scienze della Formazione, Università di Catania), Carlo Arrigo Umiltà (Università degli Studi di Padova), Remo Job (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia), Maria Sinatra (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari ‘Aldo Moro’), Caterina Arcidiacono (Università degli Studi di Napoli Federico II), David Lazzari (CNOP)*

## “THE TRIAD” AS PARADIGM FOR THE STUDY OF FAMILY FUNCTIONING

*Proponenti: Ada Cigala (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma), Elena Venturelli (Università di Parma), Laura Fruggeri (Università di Parma)*

Cox et al. (1997) underlined the importance of a systemic perspective to understand families. In particular, “the triad” as paradigm for the study of family functioning allows scholars and professionals to analyze the different family configurations deriving from the combinations of the multiple positions that each party can take through interconnecting with the positions of the others. The dynamic complexity of triadic interaction is characterized by some specific properties that differ from the dyadic one. The triadic interactions allows the individuals to experience cooperation, conflict and negotiation, to have the opportunity to take active and peripheral positions and to engage them in continuous micro-transitions. In studying triadic interactions, the methodological issues are of central importance (Venturelli et al., 2015). The symposium includes several contributions that use different triadic paradigms for the analysis of family functioning in various situations: during the transition to parenthood (Putzu, et al.), during the diagnostic and therapeutic process (Bettiol et al.) and in relation to developmental of children’s socio-emotional competence (Cigala et al.) and to the acquisition and use of abstract concepts in family interactions (Mazzoni et al.).



## MUM, DAD AND THE DISCURSIVE (DE)CONSTRUCTION OF GENDER DURING THE TRANSITION TO PARENTHOOD

*Daniela Putzu (Università di Cagliari), Diego Lasio (Università di Cagliari), Jessica Lampis (Università di Cagliari), Francesco Serri (Università di Cagliari)*

During the transition to parenthood, heterosexual couples renegotiate the division of family work. Research has shown a trend towards the traditionalization of gender roles after the birth of the first child, with women who continue to bear more responsibilities than their partners in family work. This paper discusses the results of a longitudinal study aimed at analyzing the discursive construction of gender and the division of family work in heterosexual couples who are experiencing the transition to parenthood. Twenty heterosexual couples responded to a semi-structured interview on their expectations regarding the division of the family work after the birth of the child (first wave, from the fifth to the seventh month of pregnancy) and, later, on the actual division of family work (second wave, three months after the birth). A Critical Discourse Analysis highlighted the discourses that support an egalitarian division of family work and those that perpetuate a gendered division of parenting roles. The findings show the complex and subtle ways in which taken-for-granted assumptions on parenting are discursively produced, perpetuated, negotiated and challenged, thus illuminating the processes that favor or hinder an egalitarian sharing of family work.

## ANALYSIS OF INTERACTIVE FAMILY DYNAMICS DURING THE DIAGNOSTIC AND THERAPEUTIC PROCESS IN DEVELOPMENTAL NEUROPSYCHIATRY UNIT

*Michela Gatta (UOC Neuropsichiatria Infantile, Azienda Ospedale Università di Padova - Dipartimento di Salute della Donna e del Bambino, Università degli Studi di Padova), Clara Bettiol (UOC Neuropsichiatria Infantile, Azienda Ospedale Università di Padova - Dipartimento di Salute della Donna e del Bambino, Università degli Studi di Padova), Caterina Angelico (UOC Neuropsichiatria Infantile, Azienda Ospedale Università di Padova), Alessia Raffagnato (Dipartimento di Salute della Donna e del Bambino, Università degli Studi di Padova), Michela Gatta (UOC Neuropsichiatria Infantile, Azienda Ospedale Università di Padova - Dipartimento di Salute della Donna e del Bambino, Università degli Studi di Padova)*

Child's relationships play a major role determining the structure and expressiveness of many psychopathological conditions in developmental age. Thus, it's important to use methods that allow an accurate analysis of intra-family interactions, within a multi-method evaluation approach. In our study we used the Lausanne Trilogue Play (LTP) procedure to evaluate triadic interactions in 70 families of school-age patients who have been admitted to the Neuropsychiatry Unit in the Padua Hospital. The goal of the study was to analyze the benefits for diagnosis definition, therapeutic approach, and post-discharge therapeutic path. We analyzed the characteristics of family interactions in relation to the main assigned ICD-10 diagnosis, psychopathological symptoms, severity of the clinical situation, and presence of comorbidity. The results show statistically significant relationships between intra-family interactions and symptomatology, severity of clinical presentation, and presence of self-harm and dysfunctional personological traits. Variables of family observation were also analyzed considering the post-discharge treatment program. Clinical and therapeutic implications were discussed and compared with indications provided by guidelines and literature.

## FAMILY FUNCTIONING IN MICROTRANSITION AND SOCIO-EMOTIONAL COMPETENCE IN PRESCHOOLERS

*Ada Cigala (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma), Elena Venturelli (Università di Parma), Laura Fruggeri (Università di Parma)*

Microtransitions can be identified as those exchanges that occur during everyday life when family members negotiate a change in their interactions. This study aims to highlight how certain aspects of family functioning during microtransitions could influence the development of children's socio-emotional competence in their interactions with peers. 24 family triads (mother, father, and preschooler child) were observed in a laboratory during semi-structured play activities (TIAP: Triadic Interaction Analytical Procedure) for a total of 57 interactive sequences. The children's socio-emotional competence was assessed through the analysis of 142 interactive sequences video-recorded during triadic semi-structured play in the school ( $K = 0.73-0.92$ ) and the Social Competence and Behaviour Evaluation by teachers. The analysis pointed out that the children in families showing a higher degree of coordination were more relationally and socially competent with peers. They show a greater ability to stay in one's role ( $X^2(2) = 10.32$ ;  $p < 0.001$ ), positive expressiveness in a peripheral role ( $X^2(2) = 10.66$ ;  $p < 0.01$ ), and attention and responsiveness towards peers ( $X^2(2) = 9.57$ ;  $p < 0.01$ ). These results highlight the importance of family microtransitions as a significant space of development.

## ACQUISITION AND USE OF ABSTRACT CONCEPTS IN THE CONTEXT OF FAMILY INTERACTION

*Silvia Mazzoni (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Anna Maria Borghi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Francesca Bellagamba (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Alessandro Gennaro (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma, Italia), Giuliana Mazzoni (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Melania Paoletti (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Concepts are the building blocks of our knowledge that link our past, present and future. They are distinguished between concrete and abstract. Different kinds of abstract concepts have been studied (emotional, numerical, philosophical); for each of them, specific dimensions (emotional, linguistic) are relevant. Abstract concepts are more complex than concrete ones and generate more uncertainty by requiring crucial metacognitive monitoring: the continuous inner search for the meaning of words and the implicit or explicit request for information by interactive partners. The study is investigating the acquisition and use of concrete and abstract concepts during family interaction by analyzing conversations between 5-year-olds and parents, examining differences in terms of eliciting interactive dynamics and not only contents. The role of triadic interaction in favoring the development and acquisition of abstract vs concrete concepts is studied. The experimental setting, derived from the Lausanne Trilogue Play protocol, provides for the participation of mother, father and child in 4 different phases of interaction. A hybrid approach to concepts is adopted which considers body experience, language and social interaction as crucial for the acquisition and use of concepts.

# BURGEONING METHODS IN PSYCHOLOGICAL ASSESSMENT

*Proponente: Paolo Roma (Dipartimento di Neuroscienze Umane, Sapienza Università di Roma)*

The field of psychological testing and assessment is dynamic and continuously evolving. Some changes are the result of theoretical or technical advances, others reflect philosophical shifts within the profession, and still others are the result of external societal, economic, and political influences. It is important that assessment professionals keep abreast of new developments in the field and consider them with care (Reynolds, Altmann, & Allen, 2021). To illustrate some of the new frontiers in psychological assessment, Roma et al. will summarize the most recent updates in personality evaluation such as the Computerized Adaptive Testing, Personality Computing, and Game-like Personality Measure. Ales et al. will describe the newly developed R-PAS electronic app to administer the inkblot test remotely. Monaro et al. will illustrate the application of machine learning models to reconstruct the psychological profile of the examinee from the results of a faked psychological test. Finally, Giromini will present the Inventory of Problems – Memory (IOP-M), a newly developed test designed to assess the credibility of claimed memory problems.

## PERSONALITY ASSESSMENT IN THE TWENTY-FIRST CENTURY: WHAT'S NEW?

*Paolo Roma (Dipartimento di Neuroscienze Umane, Sapienza Università di Roma), Eleonora Ricci (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara), Cristina Mazza (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

In recent years we can trace new areas of research that may inform personality theory in an unprecedented fashion through the detection of complex patterns that cannot be retrieved by traditional approaches. For example, with the advancement of computer technology, Computerized Adaptive Testing (CAT) has emerged under the framework of the item response theory (IRT) and involves administering only the most suitable items set for each participant with a different performance or trait level (Li, She, Tu, & Cai, 2021). Furthermore, Personality Computing (PC) is a thriving field at the intersection of personality and computer science seeking to extract personality-relevant information from machine-sensed information (e.g., written texts, digital footprints, smartphone usage, non-verbal behavior, speech patterns, gameplay, etc.) via machine learning (ML) approaches (Vy Phan, Rauthmann, 2021). Finally, following the theory of implicit trait policies, Game-like Personality Measure (GPM), by incorporating game elements, enables an evaluation of personality based on which option an individual believes will be the most effective in a given scenario (i.e., the option they believe to be correct) (Harman, Purl, 2022). Cautionary notes, implications and future directions are discussed.

## THE NEW FRONTIER OF THE RORSCHACH TEST: THE ONLINE ADMINISTRATION

*Francesca Ales (Dipartimento di Psicologia, Università degli Studi di Torino)*

The spread of COVID-19, the associated emergency measures, and the imposed travel limitations required clinicians to modify their way to conduct psychological assessment. Hence, the pandemic has prompted the use of telehealth practices, calling for the need of electronic versions of commonly used assessment tools. This study illustrates the newly developed online app for administering the Rorschach test. We aimed at testing whether the remote administration would produce different results compared to the standard method. Specifically, we focused on the “first factor” of all Rorschach scores, i.e. Complexity. Sixty healthy individuals were administered the R-PAS remotely. Statistical analyses tested whether – and to what extent – Complexity scores of protocols collected via online administration departed from R-PAS normative data. For exploratory purposes, the average scores of all other Rorschach variables included in the R-PAS profile pages were also examined. The results suggest that the Complexity scores of protocols administered online closely resemble those observed in the R-PAS normative sample collected with the standard, in-person administration. However, some R-PAS variables showed significant differences from the normative data. Practical implications will be discussed.

## INTRODUCING THE IOP-M, AN OPTIONAL ADD-ON MEMORY MODULE FOR THE IOP-29

*Luciano Giromini (Università degli Studi di Torino)*

Recent research has shown that the use of symptom validity tests (SVTs) together with performance validity tests (PVTs) increases the assessor's ability to discriminate whether a given clinical presentation is credible or not compared to the use of SVTs alone or PVTs alone. In particular, it has recently been reported that the IOP-29 (a recently released SVT) is a perfect complement to the TOMM (a widely used PVT). For this reason, we have developed an incidental recall task to be used immediately after administration of the IOP-29. In this paper, we present the development of this new add-on application, which we have named "IOP-M," and report initial research in which we tested its validity and utility. Specifically, we describe the guiding principles we followed in refining the IOP-M and the empirical findings obtained in this pilot research. We also summarize the results of six international studies that examined the validity of the IOP-M in Italy, France, Slovenia, Brazil, England, and Australia. Taken together, these findings suggest that using the IOP-M in combination with the IOP-29 yields incremental validity, not only when examining feigned cognitive problems (e.g., mTBI symptoms), but also when focusing on feigned depression, PTSD, or schizophrenia.



## RECONSTRUCTING HONEST RESPONSES FROM MALINGERED ONES: A MACHINE LEARNING APPLICATION TO PSYCHOLOGICAL TESTING

*Merylin Monaro (Università degli Studi di Padova), Giulia Melis (Università degli Studi di Padova), Giuseppe Sartori (Università degli Studi di Padova)*

Malingering is a frequent issue in psychological testing, especially in forensic scenarios where monetary incentives or other forms of rewards are at stake. To identify faking-bad response styles, validity scales (e.g., F, K, L scales of the Minnesota Multiphasic Personality Inventory – MMPI -2) have been embedded in psychometric tests. However, there are no procedures currently available to reconstruct the honest responses from the malingered ones and, therefore, to obtain the actual psychological or personality profile of the examinee. Through the presentation of three case-studies, we propose the application of machine learning models to reconstruct the psychological profile of the examinee from the results of a faked psychological test: i) reconstruction of the personality profile from a faked personality questionnaire (Millon Clinical Multiaxial Inventory, MCMI-III); ii) reconstruction of the psychological profile from a faked PTSD questionnaire (Post Traumatic Stress Disorder Checklist-5; PCL-5) iii) reconstruction of the psychological profile from a faked mobbing questionnaire (Negative Acts Questionnaire-Revised, NAQ-R). The promising results of these studies open an interesting research field, with important repercussions for the forensic psychological assessment.

# COLLEGE STUDENTS' SKILLS TO PROMOTE WELL-BEING AND FACE STUDY AND CAREER CHALLENGES

*Proponente: Diego Boerchi (Università Cattolica del Sacro Cuore)*

Academic choices have effects on both the study performance and the future career. This simposio aims to share studies and considerations, from different psychological perspectives, to understand the role of learning abilities and career management skills on students' well-being to contrast dropouts and promote satisfaction in their studies and future work. The first research focuses on the protection role played by academic fit, meant as the perception of compatibility between one's features and the ones conveyed by the course attended on academic well-being during the second lockdown. The second study focuses on college students' dissatisfaction with their academic choice, intended as the consideration of abandoning the course attended without doing that, and its relation to their emotional experience and career management skills. The third research aimed to investigate the effects of known predictors of academic success on objective indices of difficulty in facing university studies and intention to college dropout. Lastly, the fourth study aimed to enhance the quality of academic paths of psychology students by understanding the role of practical traineeship in their future careers.

## THE “HIDDEN DROP-OUTS”: SERIOUSLY THINKING OF ABANDONING THE STUDY UNDERTAKEN NOT FEELING LIKE IT

*Diego Boerchi (Università Cattolica del Sacro Cuore)*

In Italy, only a drop-out from school or university is usually considered a study failure. Tutorship interventions are activated only if the student consistently risks abandoning the study course. The academic performance, and even less the students' dissatisfaction with their academic choice, are not considered particularly critical phenomena. The study presented here aimed to unearth the presence of college students not satisfied with their chosen course. They are here called “hidden drop-outs”, intended as those who seriously think of abandoning the course of study undertaken but “do not feel like it” and continue until they obtain a degree. In the sample here considered, around one-third of people who received a bachelor's degree seriously considered abandoning that course without doing it, with adverse effects on their emotional experience during the study path and, likely, on their future learning and career. Those people acknowledged that they do not have adequate career management skills, suggesting investing more in career education to promote a labor market populated by skilled, motivated, and satisfied workers.

## PREVENTING UNIVERSITY DROPOUT: FACTORS INFLUENCING ACADEMIC SUCCESS AND INTENTION TO LEAVE HIGHER STUDIES

*Marcella Floris (Università di Bologna), Greta Mazzetti (Università di Bologna), Dina Guglielmi (Università di Bologna)*

Recently, there has been an increase in the number of students enrolled in University courses in all OECD countries, but not a high increase in graduates. The issue of university dropout is particularly critical in Italy, which ranks second to last among EU countries for students who graduate. In this context, a crucial aim entails the exploration of factors able to influence students' intention to dropout and academic achievement. In the current study, 425 students from the University of Bologna filled out a questionnaire that aimed to investigate antecedents of academic success (e.g. academic and career self-efficacy, motivation, effort regulation), objective indices (GPA), and declared intention to dropout. Results indicate that the confidence in the ability to plan one's career and the effort to optimize learning processes mediate the positive relationship between identified academic motivation and student GPA, but also the negative relationship between identified academic motivation and intention to dropout. Implications of the findings for future research and for the design of effective preventive guidance interventions to meet the needs of Italian students will be discussed.

## FIT THE LOCKDOWN: THE PROTECTIVE ROLE OF ACADEMIC FIT IN A NATIONAL SAMPLE OF UNIVERSITY STUDENTS

*Chiara Ghislieri (Dipartimento di Psicologia, Università degli Studi di Torino), Amelia Manuti (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Domenico Sanseverino (Dipartimento di Culture, Politica e Società, Università degli Studi di Torino)*

The restrictions imposed by the COVID-19 pandemic have deeply impacted on students' wellbeing: isolation, anxiety, boredom, frustration, difficulties in using technology, in achieving goals, worries about the future (Aristovnik et al., 2020, Capone et al., 2020, Lederer et al., 2020). Therefore, universities have adopted specific policies trying to limit these consequences (e.g. digital support, dedicated counseling desks). Drawing on the Job Demands/Resources Model (Bakker & Demerouti, 2007), the present contribution focuses on the protection role played by academic fit (perception of compatibility between one's own features and the ones conveyed by the course attended; Schmitt et al., 2008). During the second lockdown, more than 10.000 students - enrolled in different Italian Universities (71% females; mean age 24,24 years) - filled in a self-report questionnaire encompassing academic fit perception, emotional exhaustion, engagement, study workload, internet addiction and social support. Regression analysis showed that fit was associated with lower levels of exhaustion, higher workload perception, and higher study engagement. The results suggest that the academic fit contribute to the students' wellbeing, even in an emergency time.

## THE ROLE OF INTERNSHIP FOR THE FUTURE OF PROFESSIONAL CAREERS IN PSYCHOLOGY: AN EXPLORATIVE STUDY ON THE ACADEMIC PRACTICES FEATURING ITALIAN DEGREE PROGRAMMES

*Michela Vignoli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Andreina Bruno (Dipartimento di Scienze della Formazione, Università di Genova), Giulia Sciotto (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo)*

The significant changes envisaged by the reform related to the role of internship in the degree programmes in Psychology will have important consequences for future psychologists' professional careers in Italy. Considering the relevant guiding function played by the internship in the development of future career paths of graduates, the MeMoS group, proposed a research project aimed to investigate the state of the art of the Italian degree programmes in Psychology, collecting information about internships and their impact on future psychologists' professionalisation. A structured interview was developed to understand the processes related to internships within the Psychology programmes in Italy. So far, data have been collected among 17 Universities (12 bachelor's and 31 master's), but the study is still in progress. Preliminary results highlight a weak connection between the Psychology Departments and the Orders of Psychologists and between the university tutors and external tutors working in the hosting organisations. Results of this study could be relevant to inform policymakers and academic institutions on the best practices to structure internships enhancing the quality of academic paths and career guidance for psychology students in the future.

# IDENTITIES AS A CORE ASSET FOR ADAPTATION: PERSPECTIVES FROM DEVELOPMENTAL, SOCIAL, AND WORK PSYCHOLOGY

*Proponente: Elisabetta Crocetti (Università di Bologna)*

Identities are a fundamental symbolic tool that individuals use to adapt to the multiple domains of their lives. This interdisciplinary symposium interdisciplinary integrates perspectives from developmental, social, and work psychology that provide novel insights on identity as a core asset for adaptation. Di Palma tackles the role of psychological resources that promote the consolidation of vocational identity and the prevention of distress. De Lise examines how identity processes in educational and interpersonal identity domains can satisfy core motives (e.g., enhancing self-esteem, experiencing a sense of competence, and searching for a sense of continuity over time). Crocetti addresses the interplay between adolescents' multiple social identifications and their well-being (physical health, subjective, psychological, and social well-being). Alessandri examines the relationships between work identity processes and physiological adjustment with a focus on diurnal cortisol pattern indices. Overall, these four contributions highlight that identities have significant implications for the adaptation of adolescents (De Lise and Crocetti), young adults (Di Palma), and adults (Alessandri), accounting for physiological, psychological, and social outcomes.

## UNEXPECTED EVENTS AS POSSIBILITIES FOR DEVELOPMENT IN THE CONSTRUCTION OF VOCATIONAL IDENTITY

*Tiziana Di Palma (Università degli Studi di Napoli Federico II)*

The construction of vocational identity is a process that is complicated over time and linked to personal well-being and adaptation. Therefore, interventions to support identity construction that rely on the individual's psychological resources (agentivity and creativity) suitable for facing the challenges related to the choice in the work environment are increasingly important. The study focuses on planned happenstance as a resource (in terms of optimism, curiosity, flexibility, persistence and risktaking) both to support the taking of commitments and as a protective factor against identity distress. 476 young adults (Mage = 17.47 years, SD = 0.70) with informed consent and protecting voluntariness of participation and respect for privacy, completed: Vocational identity scale; Planned Happenstance Career Inventory; Identity distress; and Satisfaction with life. Planned happenstance correlates positively with vocational identity commitments and life satisfaction; while identity distress correlates negatively with planned happenstance and positively with the dimensions of vocational identity exploration and flexibility. The data confirm the importance of planned happenstance for the consolidation of vocational identity and in the prevention of identity distress.



## THE RELATIONSHIP BETWEEN IDENTITY PROCESSES AND SATISFACTION OF IDENTITY MOTIVES

*Francesca De Lise (Università di Bologna)*

One of the main developmental tasks that adolescents face is to form their identity by exploring different possibilities and making choices in multiple domains (Meeus, 2011). Underlying the strive of this process there is the attempt to satisfy core motives (Vignoles, 2011), such as self-esteem, continuity, distinctiveness, meaning, efficacy, and belonging. The present study aims to examine the interplay between identity processes and satisfaction of identity motives. To address this issue, we considered identity processes (commitment, in-depth exploration, and reconsideration of commitment; Crocetti et al., 2008) examined in two core domains of adolescent development, the educational and interpersonal identity domains. Participants were 1154 adolescents (51.6% females, Mage=15.74 years) involved in the ongoing longitudinal study IDENTITIES. They filled out a questionnaire including measures of identity and satisfaction of identity motives. The results highlighted a nuanced pattern of associations, with identity commitment across both domains displaying the strongest links with all identity motives. Theoretical and practical implications are discussed.

## THE INTERPLAY OF SOCIAL IDENTIFICATION AND WELL-BEING IN ADOLESCENCE: A MULTI-DIMENSIONAL APPROACH

*Elisabetta Crocetti (Università di Bologna)*

Adolescents' social identities are rooted in their identifications with multiple social groups. Such groups can be differentiated according to their level of proximity (Bronfenbrenner & Morris, 2006), from close groups with whom adolescents interact daily (such as family, classmates, and friends) to more abstract groups related to cultural processes (such as national and European groups) up to identification with the supra-ordinate human group. The purpose of this study is to understand the interplay between adolescents' multiple social identifications and their well-being. By taking a multidimensional approach, well-being is examined accounting for physical health, subjective, psychological, and social well-being. Participants were 1154 adolescents (51.6% females, Mage=15.74 years) involved in the ongoing longitudinal study IDENTITIES. They completed a questionnaire including measures of identity and well-being and they wore an actigraph to assess their sleep quality. The results indicated that identification with multiple social groups is positively related to adolescents' physical, subjective, psychological, and social well-being. Notably, identification with family and classmates exerted the strongest influence on well-being.

## WORKERS' PHYSIOLOGICAL ADJUSTMENT: A MATTER OF IDENTITY?

*Guido Alessandri (Sapienza Università di Roma)*

Past research has pointed to the role of workers' self-concept as a determinant of their resilience and adjustment. However, these studies have mostly focused on correlates of self-concept components (such as identity and self-esteem) with indices of psychological adjustment almost completely neglecting possible their possible physiological implications. This study explored the relationships between a key component of work self-concept, namely work related identity, with diurnal cortisol pattern indices (i.e., CAR, DCS, AUCg), collected through saliva samples during two consecutive working days from N = 166 workers. Results revealed associations of commitment, in-depth exploration and reconsideration of commitment with diurnal cortisol parameters. In particular, results showed a relationship between more adaptive work related identity expressions higher cortisol awakening response. Moreover, less adaptive identity expression predicted a lower diurnal cortisol decline and a greater total cortisol secretion. These findings highlight the potential physiological correlates of work related identity. keywords: work identity; cortisol; physiological adjustment.

# NATURE BEYOND FRONTIERS: A MULTISECTORIAL GLANCE AT ENVIRONMENTAL PSYCHOLOGY RESEARCH

*Proponente: Annalisa Theodorou (Università degli Studi Roma Tre)*

This symposium presents four studies in which the added value of multidisciplinary (environmental sciences) and interdisciplinary (social psychology, psychometrics, and cyberpsychology) approaches for environmental psychology is central. In the first study, the use of instruments taken from other environmental disciplines, such as the Normalized Difference Vegetation Index (NDVI) and the sunlight level, highlights the importance of using objective measures to better understand the restorative effect of nature. The second study focuses on the often-neglected interplay of the personality of park visitors and the environment in determining the beneficial effect of green. Following this line, the third study will propose an Italian version of the Revised Environmental Identity Scale, which focuses on the measurement of individual differences in connectedness with nature. Not everybody can access natural environments (e.g., hospitalized and quarantined people). Virtual reality seems promising in compensating for the lack of outdoor nature exposure. Thus, the fourth study will offer findings from a virtual reality experiment on young adults' well-being with a focus on practical implications. The four contributions follow the new frontiers of multisectorial environmental psychology.

## EFFECT OF THE INTERPLAY AMONG GREENNESS LEVEL, SUNLIGHT INTENSITY, AND INDIVIDUAL PROPENSITY TO NATURE ON PERCEIVED RESTORATION QUALITY OF URBAN NATURE

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The beneficial effect of exposure to and immersion in natural environments on perceived wellbeing is well established. Nevertheless, we acknowledge an emerging need to disentangle the role of specific environmental features and individual factors that encourage a positive person-environment interaction. To this end, we present a study carried out in a large urban park. The aim was to evaluate the associations between certain buffer distances of greenness, measured through the Normalized Difference Vegetation Index (NDVI), using remote sensing techniques, and the dimensions of perceived restorativeness in 312 park visitors, and the mediation effect of individual propensity to nature. Moderation effect of sunlight level (measured using a digital light intensity meter) in the relationship between NDVI buffer distances and overall perceived restorativeness was also tested. Our findings revealed differentiated effects of greenness level, sunlight intensity, and individual propensity to nature in the pathways towards dimensions of restorativeness. The present work is intended to offer insight on the interplay between environmental factors and individual differences to be applied in several contexts, including the opportunity to develop tailored nature-based interventions and therapies.

## PERSONAL DISPOSITIONS EXPLAIN DIFFERENCES IN PHYSICAL HEALTH BENEFITS OF NATURE EXPOSURE: THE ROLE OF RESTORATIVENESS AND AFFECT

*Claudia Russo (Lumsa Università di Roma)*

The benefits of nature for humans' health are undeniable; nevertheless, studies on the role of personality factors involved are limited. This study was aimed at shedding light on the dynamics that result in better physical health for some individuals and not for others. We hypothesized that nature connectedness and place identity enhance physical health through higher restorativeness and positive affect, and lower negative affect. Three hundred and twelve visitors of Parco Nord Milano filled in a questionnaire in the park. We collected data on their level of nature connectedness, place identity, restorativeness, positive and negative affect, and perceived physical health while in the park. A structural equation model with a bootstrap based on 5,000 resamples with personal dispositions as predictors and restorativeness, positive and negative affect as parallel mediators, and physical activity as the outcome. Results showed that both nature connectedness and place identity enhanced physical health through restorativeness and positive affect, but no indirect effects were found through negative affect. Although there are individual differences, connectedness to nature and place identity could be fostered through local social policies to enhance individuals' health benefits.

## ADAPTATION AND PSYCHOMETRIC TESTING OF THE REVISED ENVIRONMENTAL IDENTITY SCALE ON A SAMPLE OF ITALIAN PET-OWNERS

*Oriana Mosca (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Silvia Ariccio (Sapienza Università di Roma)*

A part of Environmental psychology research focuses on developing, updating, and adapting tools to measure people's relationships with the environment. Susan Clayton has contributed to this field of research by proposing the Environmental Identity Scale and later the Revised Environmental Identity Scale to measure how much nature is part of someone's identity. Since an Italian version of the Environmental Identity scale (both the original and the revised version) was still missing, the present paper presents an Italian translation and adaptation of the Revised Environmental Identity Scale. The scale was translated and back-translated and it was administered online as part of a study about pet attachment to 163 pet owners living in Italy. A parallel analysis and a consequent exploratory factor analysis suggested the existence of two factors: "Connectedness to nature" (9 items) and "Protection of nature" (5 items). This structure is found to explain more variance compared to the one-factor solution proposed by Clayton and does not seem to be affected by socio-demographic variables. The discussion presents the potentials and the implications of this factor solution for the use of the scale in the Italian context.

## A PRELIMINARY STUDY ON THE EFFECT OF VR NATURE EXPOSURE ON SUBJECTIVE VITALITY: EXPLORING THE ROLE OF RESTORATIVENESS

*Annalisa Theodorou (Università degli Studi Roma Tre), Angelo Panno (Università Europea di Roma)*

The positive effect of virtual reality exposure on individuals' well-being and restorative states has been shown by several studies (e.g., You et al., 2018). Nonetheless, few studies have explored the role of exposure to distinct virtual environmental conditions in subjective vitality, defined as a positive feeling of aliveness and energy (Mattila et al., 2020). Therefore, the present exploratory study is aimed at investigating the relationship between the exposure to different VR conditions, namely an urban environment (grey condition), a national park (green condition), a natural area with a lake (blue condition), and an arctic environment (white condition), and subjective vitality in a sample of 113 university students ( $M_{age} = 21.99$ ). Furthermore, the mediating role of restorativeness in this relationship was examined. Findings show that all the virtual natural conditions were significantly more effective than the virtual grey condition in enhancing state subjective vitality through restorativeness. The current findings shed light on the role of exposure to virtual natural environments in improving individuals' positive mental states and well-being, providing meaningful guidance for those who cannot easily and physically have access to real natural environments.



# NEURAL ENTRAINMENT AS A TOOL TO EXPLORE HUMAN COGNITION ACROSS DEVELOPMENT

*Proponente: Roberta Bettoni (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

Neural entrainment refers to the adaptive function by which endogenous neural oscillations align with ongoing rhythmic stimuli in the environment. This phenomenon reveals that humans are highly attuned to structures hidden in their surroundings. Electrophysiological studies suggest that neural entrainment does not merely reflect the encoding of the stimulus features, but it is sensitive to higher-level cognitive processes, as it seems guided by attention, prior knowledge, and expectation. Since neural entrainment seems to play a critical role in a multitude of perceptual and cognitive processes, there has been growing interest in exploiting this phenomenon to investigate human cognition, especially in early development. The present symposium brings together researchers from different laboratories who exploit neural entrainment to gain knowledge on various aspects of human cognition in infancy and adulthood. The presentations, given by four young researchers, are outstanding samples of electroencephalographic research of neural entrainment in the field of speech and auditory perception, visual implicit learning, and audio-visual temporal integration.

## SYNCHRONIZING WITH THE RHYTHM: INFANT NEURAL ENTRAINMENT TO MUSICAL AND SPEECH STIMULI

*Chiara Cantiani (IRCCS Eugenio Medea), Chiara Dondena (IRCCS Eugenio Medea), Massimo Molteni (IRCCS Eugenio Medea), Valentina Riva (IRCCS Eugenio Medea), Caterina Piazza (IRCCS Eugenio Medea)*

Despite the importance that neural oscillations have assumed in the last years in the field of auditory neuroscience and speech perception, in human infants the oscillatory brain rhythms and their synchronization with complex auditory exogenous rhythms have been relatively unexplored. Here, we aimed to investigate infant neural entrainment to complex non-speech (musical) and speech auditory rhythmic stimuli. 25 8-month-old infants were included in the study. Their EEG signals were recorded while they passively listened to non-speech and speech rhythmic stimuli modulated at different rates. The temporal envelope of the rhythm patterns was extracted using a Hilbert function, and a Fast Fourier Transform (FFT) was applied to compute the frequency spectrum of acoustic energy, that varied across stimuli. FFT was applied also to the averaged EEG. Neural entrainment to the incoming rhythms was measured in the form of peaks emerging from the EEG spectrum at frequencies corresponding to the rhythm envelope. Analyses on the averaged EEG spectrum revealed clear responses above the noise floor at frequencies corresponding to the rhythm envelope, suggesting that infants' brain at 8 months of age are capable to entrain to the incoming complex auditory rhythms, for both music and speech.

## THE TIME-COURSE OF VISUAL RULE LEARNING IN PREVERBAL INFANTS: EVIDENCE FROM NEURAL ENTRAINMENT

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Detecting and generalizing repetition-based abstract patterns in continuous streams of information (i.e., Rule Learning, RL) is a key cognitive ability available from early on in development. Here, we investigated the time-course of visual RL in 9-month-old infants by capturing changes in neural entrainment to structures embedded in the input. Infants were exposed to sequences of shapes organized into ABA triplets. Each shape was presented at the frequency of 6Hz, while the frequency of triplets was 2 Hz. In the test phase, infants were presented with triplets of novel shapes instantiating the familiar rule (ABA) and a novel one (ABB). Infants showed strong entrainment to the embedded visual structures already after the first 20 seconds of exposure, revealing a clear EEG time-locked response at the item frequency (6 Hz) as well as at the triplet frequency (2 Hz). At test, infants' looking times did not differentiate between the familiar and novel rules, indicating that the neural encoding of the ABA structure during learning did not translate into a robust novelty preference at the behavioral level. These preliminary results suggest that neural entrainment is a promising tool to explore how the infant's brain tracks regularities and extracts structures hidden in the input.

## FREQUENCY-BASED NEURAL DISCRIMINATION IN FAST PERIODIC VISUAL STIMULATION

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Cognitive agents detect and exploit statistical regularities in the continuous stream of information they receive from the environment. The present study investigates the pervasiveness of implicit statistical learning by asking whether hidden regularities can elicit selective neural entrainments in adult skilled readers. Sequences of words and pseudo-reading material, presented at a fast rate of 6Hz were interleaved with oddballs, inserted periodically every 5 items. Crucially, sequences were made of stimuli of same category (e.g., words in words) and the only distinction between base and oddball items was the frequency of occurrence of individual tokens within a stream. Within a few minutes of stimulation, oddballs evoked a reliable neural entrainment at the predefined stimulation frequency of 1.2 Hz (i.e., 6/5), indicating the discrimination between two locally-defined, distinct groups of items solely informed by token frequency. Our findings provide evidence for an online neural marker of implicit statistical learning emerging fast and automatically; such mechanism operates regardless of stimulus familiarity, as it surfaced similarly with words, pseudowords, letter strings and pseudoletters, and might underpin the bootstrapping of linguistic categories.

## NEURAL ENTRAINMENT TO (QUASI)RHYTHMIC AUDIO-VISUAL STIMULI AND TEMPORAL BINDING WINDOWS

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Temporal binding windows (TBWs) are time windows in which multisensory stimuli are bound into a single percept, even when not physically synchronous. TBWs are known to widen as a function of stimulus complexity or neurodevelopmental conditions (e.g., autism, schizophrenia), but the key features contributing to this TBWs malleability have yet to be identified. The (quasi)rhythmic properties embedded in natural scenes (e.g. speech) are among the potential candidates. In a series of online psychophysical studies (N=183), we presented a simultaneity judgment task with pulsing audio-visual (AV) stimuli composed of circles and sounds varying with different rhythmic properties (1 vs. 2 vs. 3 Hz; or regular vs. speech-like). In an additional EEG experiment (N=31), we explored the interplay between endogenous individual alpha frequency (IAF) and neural entrainment to AV pulsing stimuli in modulating cross-modal integration. Results show that TBWs decrease as the stimulus frequency increases and that speech-like stimuli are integrated across larger TBWs. Furthermore, neural entrainment to sensory stimulation promotes AV integration, with considerable individual differences whereby faster IAFs correlate with narrower TBWs and higher neural entrainment to rhythmic AV stimuli.

# NEW CHALLENGES FOR DEVELOPMENTAL AND CLINICAL PSYCHOLOGY: TRANSGENDER AND NON-BINARY GENDER IDENTITY CONSTRUCTION DURING THE LIFE COURSE

*Proponente: Fau Rosati (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma)*

From childhood, gender represents a salient feature for the definition of the self. The development of a gender identity that falls outside cisnormative expectations (e.g., when the perceived gender does not match the sex assigned at birth) poses unique challenges. Due to social stigma, transphobia, and imposed gender binarism, transgender and non-binary (TNB) people have to manage several aspects related to their gender identity during the entire life course. The symposium will include four studies addressing TNB people's gender identity construction during the life course: 1) the development and the expression of non-binary identities in terms of achievement of self-awareness and self-definition; 2) the process of chosen name and its relevance to identity value; 3) gender identity-related experience and perception within the public space in terms of challenges and stigma; 4) the desire and related possible scenarios of parenthood. Addressing these aspects is fundamental to offering more comprehensive perspectives of gender. Developmental and clinical psychology are required to move away from cisnormative and binary assumptions to create an affirmative theoretical framework and improve clinical practice.

## THE DEVELOPMENT AND THE EXPRESSION OF NON-BINARY IDENTITIES IN ITALIAN YOUNG ADULTS. A QUALITATIVE STUDY USING CONSENSUAL QUALITATIVE RESEARCH

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**Aim:** Research focusing on the identity development of individuals that do not identify in binary gender categories is constantly growing. The aim of this contribution is to explore the complexity of the experiences of people identifying as nonbinary, shedding light on the processes behind the development of gender identity in this population. **Method:** Forty nonbinary participants ranging from 19 to 36 years of age ( $M=27,19$ ;  $SD=4,77$ ), were administered a semi-structured interview created for this study. The interview protocol allowed to explore different aspects of the nonbinary identification process, ranging from the internal experience of gender to gender expression, including the ways of defining themselves through language (e.g., use of pronouns and labels), across time and in different contexts. **Results:** Using the Consensual Qualitative Research method, several themes emerged: expression of gender nonconformity in childhood; relationship between sexual orientation and gender identity; achievement of self-awareness and self-definition. **Conclusions:** In a society rooted in a binary gender system nonbinary people face complex challenges, using multiple strategies to negotiate and express their identity. Identifying these experiences is key to improve the clinical practice.

## IDENTITY VALUES OF CHOSEN NAME IN TRANS AND NONBINARY INDIVIDUALS. A QUALITATIVE INVESTIGATION

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The purpose of this study is to look into the process of choosing a name in the Italian trans community, which includes trans and nonbinary people (TNB). We were interested in knowing more about what name choice patterns exist, what identity meanings the chosen name conveys, and whether the name has changed over time. To achieve this goal, a qualitative investigation was carried out consisting of a survey with open-ended questions. Participants included a total sample of 124 individuals (46 nonbinary, 66 transmasculine, and 12 transfeminine). Six overarching themes emerged from the content analysis, which may be divided into two broad macro-areas. The first macro area concerned the process of deciding on a name, and it contains the following overarching themes: 1) name experimentation; 2) name choosing tactics, and 3) sharing the decision-making process. The second macro area concerned the identification values that the TNB person's choice of name may have, and it contains the following overarching themes: 4) maintaining a connection to the past; 5) separating from the past, and 6) affirming one's chosen name. Results indicate that the exploration of name choice in TNB individuals may offer relevant insight into identity development and self-awareness.



## NON-BINARY PEOPLE LIVING IN A BINARY WORLD: EXPERIENCES AND EXPECTATIONS WITHIN THE GENDERED PLACES

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Non-binary people often face challenges related to their gender identity in a binary society. The gendered places (e.g., public restrooms, changing rooms) may be perceived as threatening and unsafe contexts because of imposed male/female choices that are not representative of non-binary gender identities and expressions. Non-binary people experience specific forms of stigma and adopt different coping strategies to manage the stress they face when living in such contexts. This study aims to explore non-binary people's experiences of stigma in public space through a semi-structured interview. Forty participants in the age range of 19-36 years ( $M=27,19$ ;  $SD=4,77$ ) took part in the study. Three main themes emerged from Thematic Analysis: 1) The paradoxical effect of passing on the sense of safeness and social dysphoria; 2) Avoid social and sports activities to avoid harassment; 3) Experiences of misgendering, intrusive questions, guilty, and disease within gendered places. Results show that gendered places, interactions, and activities may cause negative experiences and expectations. From a clinical point of view, the study contributes to increasing knowledge of the stigma affecting the non-binary population and the strategies adopted to improve psychological and relational well-being.

## PARENTHOOD DESIRE IN TRANSGENDER AND NON-BINARY PEOPLE AND RELATED POSSIBLE SCENARIOS WITHIN THE ITALIAN CONTEXT: QUALITATIVE ANALYSIS OF TWO FOCUS GROUPS

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Despite the increase of social awareness in the last years on the possibility for transgender people to be parents, thanks to the development of new reproductive technologies and innovative laws promulgated in various countries, this theme represents a taboo for many nations where social prejudice and underground hostility towards the transgender play a great role in guaranteeing equal opportunities and treatments. This research project aimed to explore, via focus group, the feelings, and thoughts of Italian transgender and non-binary people on parenthood desires. Thirteen participants (age range 19-50y) were involved. Transcripts were analysed following the Thematic Analysis. Participants emphasised the stigma associated with being transgender, and the taboo surrounding transgender parenthood highlighted societal challenges for transgender parents. For those who had not started HRT yet, parenthood was indefinite and very far into the future: they report feeling “like a new adolescent again,” wanting to enjoy newfound freedom. The (ir)relevance of the biological bond emerges as a topic related to the challenges of filiation, procreation, and jurisdiction. All participants agreed with the need to educate the Italian society on the right of transgender people to become a parent.

## PALLIATIVE PSYCHOLOGY: A NEW FIELD OF STUDY AND RESEARCH

*Proponente: Ines Testoni (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

Palliative care is a range of therapeutic, diagnostic and care interventions aimed at both patients and their families, in order to: a) guarantee total support for patients whose illness has an unfavourable prognosis and no longer responds to active treatment; b) increase the quality of life for both patients and their families, even in the terminal phase of the illness; c) help families to grieve after the death of their loved one. In palliative care, psychology is of fundamental importance, because it can offer support to patients and relatives as well as to health professionals to ensure their professional well-being. The symposium considers on the one hand the need to develop curricular paths in psychology degree courses aimed at ensuring a basic training on these topics, as indicated by the Ministry of Health and Ministry of University and Research (<https://www.miur.gov.it/web/guest/lauree-e-lauree-magistrali>), also presenting the results of an Erasmus Plus project for teaching palliative psychology, and on the other hand discusses some results of research carried out in the field of oncology and rare diseases.

## CONTINUITY OF CARE IN RARE DISEASES: AN EMERGING NEED FOR PSYCHOLOGICAL PALLIATIVE CARE

*Massimo Ingrassia (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina),  
Loredana Benedetto (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina)*

A recent study by Benedetto et al. (submitted) with adults affected by Chiari disease type I (CM-I), a rare neuroanatomic malformation, confirmed that patients' quality of life is negatively heightened by elevate anxiety or depressive symptoms. For this rare group of cerebral abnormalities, the elective treatment is neurosurgery. However, literature on CMs highlighted that also after a successful neurosurgery, significant percentages of patients do not report an improvement in the quality of life. This is the case of patients with elevate anxiety/ depression who report worse QoL in all assessed domains, with more severe physical symptoms, affective suffering, and reduced daily and social functioning, regardless the neurosurgical history (operated/not operated). A palliative approach for psychological symptoms and pain control is needed for these patients. However, CMs are only one of the many rare diseases (about 8000) affecting population. In Europe a few million people are affected overall by rare diseases that have mainly a chronic course and require the continuity of care and patient's family taking charge: this is the evidence of the emerging need for implementing a continue, palliative psychological care in rare diseases as CMs.

## PERCEIVED ORGANIZATIONAL SUPPORT MODERATES THE EFFECT OF JOB DEMANDS ON OUTCOMES IN ONCOLOGY WORKERS: INDICATIONS FOR THE PRACTICE

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The impact of both demands and organizational and individual factors on Burnout and job satisfaction was primarily studied using the JD-R framework; however, the contributions that considered oncologic HCWs are few. Using the JD-R model, a study was designed analyzing the differential contribution of psycho-physical and emotional JD on outcomes, and the moderating effect of POS with a sample of 165 oncology workers. We used the following measures: JD (cognitive, temporal, problem-solving and emotional); POS, Self-esteem, Fatigue, BO, Satisfaction, Performance. Results showed that: (a) all direct model relationships between JD and JD-R and outcomes are confirmed; (b) the role of moderator between JD and outcomes is confirmed for POS but not for self-efficacy; (c) the role of moderator between JD-R and outcomes is confirmed for the JD. The theoretical implications are discussed, but also and above all the possible practical implications; in addition to flexible training designed to generate a high level of work engagement and self-efficacy and, reduce the negative effects of work stress factors, management practitioners should implement the six conditions from Kanter's theory on structural empowerment (SE) to improve perceptions of support from managers and the organization.

## POSITIVE PSYCHOLOGY: CONTRIBUTIONS FOR PALLIATIVE PSYCHOLOGY

*Chiara Ruini (Dipartimento di Psicologia, Università di Bologna)*

A large body of research in the field of positive psychology showed that it is possible to develop a sense of personal growth with a renewed meaning and purpose of life, in the aftermath of traumatic events, such as oncological diseases. These positive changes can also include improvements in interpersonal relationships, greater spirituality, and a greater awareness of one's personal strengths. These psychological phenomena were described by Tedeschi and Calhoun (1989) with the term "post-traumatic growth" (PTG). It is associated with a better mental health profile and better coping strategies in dealing with traumatic events and life threatening illnesses, such as oncological diseases. For instance, various investigations found that breast cancer survivors reporting higher levels of PTG also reported lower depression, anxiety and psychological distress compared with survivors with lower PTG. PTG was found to influenced the outcome of oncological treatment. These investigations and related scientific studies are presented within the course of study: "Clinical Applications or Positive Psychology" at the University of Bologna. These concepts have a crucial role for the education and application of modern psycho-oncology.

## PSYCHOLOGY AND PALLIATIVE CARE IN THE LIFESPAN: DEATH COMPETENCE, LEARNING AND RESEARCH

*Ines Testoni (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Lucrezia Tomberli (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Enrica Ciucci (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

Palliative care is concerned with the physical, psychosocial, and spiritual problems of patients with life-threatening illnesses and of their families, then palliative psychology is gaining increasing importance in all areas of psychological research and health care intervention because it offers possibilities for both clinical and social intervention. The need to offer systematic training on these issues in master's degree programs has been emphasized by MUR and the Ministry of Health. At University of Florence, the course "Crisis and evolutionary transitions in terms of disease" deals with chronic disease during the whole lifespan according both to the bio-psycho-social and Bronfenbrenner's ecological approach to illustrate the relationships between the contexts, family and health system. At University of Padova, the course of "Psychology of end-of-life relationships, loss, death" considers specifically the issues of bereavement and accompaniment. The research developed in this field considers representations of death and death education at different stages of life and in the health professions.

# PROTECTIVE AND RISK FACTORS FOR PSYCHOPATHOLOGY IN ADOLESCENCE AND YOUTH

*Proponente: Barbara Barcaccia (Sapienza Università di Roma - Associazione di Psicologia Cognitiva APC e Scuola di Psicoterapia Cognitiva)*

Adolescence and youth are critical times for mental health, considering that half of all psychiatric problems begin during this period, with depression and anxiety representing the most prevalent mental disorders among these age groups. Depression and anxiety have adverse consequences, such as impaired social relationships, poorer academic performance, withdrawal from school, and increased risk of substance abuse and suicide. Research highlights not only how a series of unmodifiable risk factors are relevant for understanding the development of mental disorders in adolescents, but also the role of several protective factors. Nevertheless, it seems pivotal to explore the role for mental health of those protective and risk factors that are amenable to change, in order to devise effective prevention and intervention strategies. Our symposium aims at exploring the complex network of dimensions contributing to mental health problems in youth, especially acknowledging modifiable risk and protective factors. Along these lines, the contributions will highlight the protective role of mindfulness, social safeness, attachment, self-compassion and forgiveness, and the detrimental role of revenge and self-criticism.



## PROTECTIVE AND RISK FACTORS FOR DEPRESSION AND ANXIETY IN YOUTH. THE PROTECTIVE ROLE OF SELF-COMPASSION AND MINDFULNESS AND THE DETRIMENTAL ROLE OF REVENGE AND SELF-CRITICISM

*Barbara Barcaccia (Sapienza Università di Roma - Associazione di Psicologia Cognitiva APC e Scuola di Psicoterapia Cognitiva), Petrocchi Nicola (John Cabot University, Italy), Jayne Hartstone (University of Waikato, New Zealand)*

The present study aimed at exploring the unique contributions of modifiable protective and risk factors associated with depression and anxiety in adolescents and youth. A sample of 424 participants (age range 13-22) completed mindfulness, social safeness, self-reassurance, forgiveness, positive and negative affect, revenge, self-criticism, depression and anxiety measures. We applied a stepwise multiple linear regression, in which the strongest protective factors were extracted first, followed by the next strongest factor, while controlling for the combined effect of previously extracted factors, until no significant factors were identified. Self-reassurance, mindfulness and social safeness were the strongest and the most relevant protective factors against depression and anxiety. The major risk factors were self-criticism, revenge and negative affect. Our findings highlight the protective role of self-reassurance, mindfulness and social safeness against both depression and anxiety in youth, and the detrimental role of revenge and self-criticism. Future experimental studies could evaluate the effects of interventions promoting mindfulness, self-reassurance and social safeness and decreasing revenge and self-criticism on anxiety and depression in youth.

## EXPLORING ADOLESCENTS' PSYCHOPATHOLOGY SYMPTOMS THROUGH NETWORK ANALYSIS: THE PROTECTIVE ROLE OF ATTACHMENT, SELF-COMPASSION AND MINDFULNESS

*Susanna Pallini (Università degli Studi Roma Tre), Matti Cervin (Lund University, Sweden), Oleg Medvedev (University of Waikato, New Zealand)*

Literature shows that self-compassion, mindfulness and secure attachment are protective factors against psychopathology during adolescence. Nevertheless, it is unknown how these dimensions are related to each other, and which are most strongly linked to psychopathology. A large sample of adolescents (age range 14-18; n=1660) completed validated measures of attachment, mindfulness, self-compassion, depression, anxiety and anger. We employed network analytic methods to better understand the unique associations among these dimensions. Self-hate was positively linked to depression. Mindfulness was linked to lower levels of depression and anxiety, whereas self-compassion was linked to lower levels of anxiety. In turn, self-hate and self-compassion and were differentially linked to specific facets of attachment, particularly trust in parents. A series of clinical implications might be drawn from our findings: mindfulness-based interventions and clinical techniques based on attachment theory may both promote self-compassion, which in turn could alleviate depression and anxiety symptoms. Moreover, interventions directly targeting the different facets of self-compassion, hold promise to achieve positive effects on the well-being of adolescents.

## REASSURING AND COMPASSIONATE ATTITUDES TOWARD THE SELF MEDIATE THE RELATIONSHIP BETWEEN FORGIVENESS AND DEPRESSIVE SYMPTOMS IN ADOLESCENTS

*Andrea Pozza (Università degli Studi di Siena), Giovanni Maria Vecchio (Università degli Studi Roma Tre),  
Università Degli Studi Roma Tre*

There is now ample evidence that reassuring, compassionate attitudes toward the self and interpersonal forgiveness are relevant for well-being. Aim of the present study was to test the mediational role of self-related attitudes (self-reassurance and self-criticism) on the relationships between depression and the three dimensions of forgiveness: benevolence, avoidance and revenge. The sample was composed of 2105 adolescents (1126 girls; age range 13-20) who completed a battery of questionnaires (Children's Depression Inventory, CDI; Transgression-Related Interpersonal Motivations Inventory- 18, TRIM-18; Forms of Self-Criticising/Attacking and Self-Reassuring Scale, FSCRS). Our results showed that self-related attitudes mediated the associations of interpersonal forgiveness with depression: the more participants were forgiving, the more they were self-compassionate, and, consequently, the less they were depressed. Conversely, the more they were avoidant or revengeful, the more they criticised themselves, and, consequently, the more they were depressed. Our findings demonstrate the relevance of reassuring and compassionate attitudes toward the self both to reduce the negative impact of revenge and avoidance on depression, and to boost the beneficial effects of forgiveness.

## ADOLESCENTS' FORGIVENESS AS A MECHANISM OF SELF-REGULATION OF DEPRESSIVE FEELINGS

*Edoardo Saija (Sapienza Università di Roma), Angelo Maria Saliani (Associazione di Psicologia Cognitiva APC - Scuola di Psicoterapia Cognitiva srl SPC), Barbara Barcaccia (Sapienza Università di Roma)*

A large number of studies have demonstrated the role of forgiveness as an effective mechanism of self-regulation of depressive feelings. The present study aimed at exploring the associations among dimensions particularly relevant to adolescents' well-being, including forgiveness, anger, depression and Hedonic Balance (HB). We used a structural equation modelling approach to test the fully mediational role of the different dimensions of anger in the relationship between forgiveness and depression. The sample included 773 adolescents (69% girls). Forgiveness was positively and negatively related to, respectively, HB and depression, through a general effect of anger: more forgiving adolescents had higher HB and lower depression, with a lower general tendency to experience anger. The model invariance was supported across gender. Our findings suggest that forgiveness could be a significant protective factor against depression for adolescents, helping them to effectively manage anger, thus fostering emotional health. Educational and clinical implications of our study regard the potential of forgiveness as a well-being resource that can be promoted both in educational and clinical settings.

# **SOCIAL ATTUNEMENT: HOW THE VARIABILITY OF COMMUNICATIVE COMPETENCE ENTAILS DIFFERENT FORMS OF INTERSUBJECTIVITY IN MOTHERS AND CHILDREN WITH TYPICAL OR ATYPICAL CONDITIONS**

*Proponente: Paola Rigo (Università degli Studi di Padova)*

The symposium aims to identify innovative methods for early assessing psychological and neurophysiological cues in social attunement (SA) through a multi-perspective approach. A critical competence required by caregivers is adapting their behavior to the child's typical and atypical characteristics (e.g., visually impaired VI, preterm PT) that change how dyads access interpersonal experiences. Despite the importance of maternal flexibility in supporting the child in risk conditions, little is known about the impact of children's visual impairment in shaping maternal behavior when coping with infant distress. Also, no quantitative methods have been presented to evaluate and enhance social competences in VI (e.g., visual feedback). Moreover, the mother-child interactive exchange occurs on verbal and non-verbal levels, and only a few studies have investigated mothers' speech to infants in terms of function and its congruence with nonverbal indices, which determine a coherent experience of attunement. Finally, few studies have focused on brain circuits responsible for the emergence of interpersonal brain-to-brain attunement in VI and PT. A multidisciplinary understanding of intersubjectivity components will help detect and assess alterations that prevent dyadic SA.

## HOW DO VISUALLY IMPAIRED INFANTS (AND THEIR MOTHERS) RESPOND TO THE FACE-TO-FACE STILL-FACE? A PRELIMINARY STUDY

*Elena Capelli (IRCCS Fondazione Mondino), Luisa Vercellino (IRCCS Fondazione Mondino), Federica Morelli (IRCCS Fondazione Mondino), Laura Carraro (IRCCS Fondazione Mondino), Sabrina Signorini (IRCCS Fondazione Mondino)*

Socio-emotional stress regulation (SESR) is key to infants' development. Previous research used the Face-to-Face Still-Face (FFSF) procedure to assess SESR and highlighted how maternal voice and touch support infants' capacity to respond to stress. Less is known on SESR in visual impaired (VI) infants. Aims of the study: (1) comparing typically developing (TD) and VI infants' SESR in response to the FFSF and (2) exploring the role of mothers' voice and touch on infants' SESR in both groups. 9-to-12-month VI and TD infants and their mothers participated in a videotaped FFSF session. Infants' negative emotionality and avoiding gaze orientation, mothers' verbal and touching behaviours were micro-analytically coded. Preliminary data showed higher negative emotionality and avoiding gaze during still-face phase in both groups. Mothers of TD infants increased mind-oriented verbal comments and decreased the use of playful touch after the still-face phase, whereas mothers of VI infants did not. The study suggests that VI and TD infants are similarly sensitive to maternal unresponsiveness. Mothers of VI infants might use less mind-oriented caregiving and more playful tactile stimulations when supporting their infants SESR. These data offer potential targets for early intervention.

## SOCIAL INTERACTION IN THE ABSENCE OF VISUAL EXPERIENCE

*Giulia Cappagli (Unity for Visually Impaired People, Istituto Italiano di Tecnologia), Monica Gori (Unity for Visually Impaired People, Istituto Italiano di Tecnologia)*

During everyday interactions, social cues typically take the form of body language and therefore require vision in order to be understood [1]. Indeed, it has been shown that visual deprivation from birth might adversely affect social skills in visually impaired people [2-5]. For instance, children with visual disabilities often do not display a full range of play behaviors [3-8], spend more time in solitary play interacting more with adults than with their sighted peers [5, 7, 9-14] and show peer-related social impairments [15, 16]. Although coordinated and joint actions are critical to human social interaction [17, 18], no quantitative methods have been presented so far to evaluate social competences in visually impaired people. We present a series of studies in which we investigated social interaction among agents affected by visual deprivation and tested the efficacy of a new innovative tool to improve social interaction among children with visual disabilities. Overall we found that social interaction abilities in visually impaired individuals may be originally less efficient due to reduced capacities to derive communication flows from body movements but also may be significantly enhanced with specific multisensory training fostering auditory sonification of body actions.

## HOW MATERNAL AFFECT REGULATION IMPACTS DYADIC EMOTIONAL AVAILABILITY AND AFFECTIVE INFANT-DIRECTED SPEECH

*Bianca Filippi (Università degli Studi di Padova), Arianna Bentenuto (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Paola Rigo (Università degli Studi di Padova)*

The importance of the mother-infant relationship for the child's long-term physical and mental health is well established. While affective non-verbal (NV) components of dyadic interactions have been extensively investigated, few studies focused on the verbal components (V), such as the functional characteristics of mothers' speech directed to infants (e.g., affective). Using an integrated perspective, this study aimed to investigate Emotional Availability [EA] (NV) and maternal speech (V), and the influence of maternal well-being and emotion regulation (ER) in 35 mothers and their 4-29-month-old children that were videotaped during a 15-min free play interaction. EA was coded through the EA Scales and maternal speech using a validated coding scheme. Preliminary analysis showed a significant association between maternal sensitivity and the use of affective speech. We also found a predictive effect of parental distress on maternal affective speech directed to infants and a predictive result of emotion regulation difficulties on intrusive behaviors. Our preliminary findings support the importance of including maternal speech analysis in evaluating early mother-infant interactions.



## PARENT-INFANT INTERPERSONAL NEURAL ATTUNEMENT IN AT-RISK CONDITIONS: TOWARD TRANSLATIONAL HYPERSCANNING WITH VISUALLY IMPAIRED AND PRETERM INFANTS

*Elisa Roberti (IRCCS Fondazione Mondino), Giorgia Anceresi (IRCCS Fondazione Mondino)*

The early emergence of dyadic attunement in parent-infant interactions is key for the optimal development of typically developing infants and for those who present risk conditions. One way to investigate the cerebral circuits responsible for the emergence of dyadic attunement is through hyperscanning, a technique that allows to record parent-infant inter-brain synchrony (IBS) in live interactions. Translational applications of hyperscanning in clinical pediatric settings are yet to be explored. Here, we present a study protocol in which an electroencephalography (EEG) hyperscanning paradigm will be used to assess the IBS in typical infants as well as in two populations of at-risk infants: preterm and low-vision infants. Preterm infants face early partial separation from their caregivers in the intensive care units; low-vision infants have reduced access to interactive cues when interacting with their parents. As such, using EEG hyperscanning in these two clinical populations may provide relevant insights into (a) altered patterns of IBS and (b) early dyadic targets towards smarter family-centered interventions. We will describe the methodology and the clinical implications of this innovative approach, integrating clinical and developmental know-how in psychology and neuroscience.

## **SUBJECTIVE WELL-BEING: NEW PERSPECTIVES IN ASSESSMENT IN DIFFERENT LIFE DOMAINS**

*Proponenti: Paola Magnano (Università degli Studi di Enna 'Kore'), Ernesto Lodi (Università degli Studi di Sassari), Laura Francesca Scalas (Università di Cagliari)*

In these first decades of the 21st century, the interests on the topic of people's well-being, both in scientific studies and in professional psychological practices have multiplied in a preeminent way. The concept of well-being is a complex and multidimensional construct, concerning the emotional, cognitive, behavioural, personal, and social spheres of human experience and their optimal functioning. It has been conceptualized in different theoretical frameworks and assessed using different type of indicators. Undoubtedly, subjective well-being plays a significant role in quality of life, in the most important life's domains, such as academic, professional, interpersonal. The symposium aims to present the most recent research on the assessment of subjective wellbeing and of its relationships with psychological resources in different life domains.

## THE ITALIAN VALIDATION OF THE WELL-BEING PROFILE

*Laura Francesca Scalas (Università di Cagliari)*

Moving from the notion of well-being as positive mental health, Marsh and colleagues (2020) developed the Well-Being Profile (WB-Pro), a multi-item and multidimensional instrument with strong psychometric properties and a solid ground in theory. The instrument includes aspects of hedonic and eudaimonic well-being and can overcome limits in existing instruments. We developed the Italian version of the WB-Pro through back-translation procedures. A group of 1451 participants (910 = F, 62.7%; age range: 18-70, Mean age = 32.34, Standard Deviation age = 13.64) completed the instrument online. The 15-factor structure (competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships, clear thinking, self-acceptance, autonomy, empathy and prosocial behavior, resilience, self-esteem, vitality) was supported by Exploratory Structural Equation Modelling (ESEM) and showed invariance across gender, age, and education. All scales had adequate values of reliability (omega range: .78-.90). Background variables and various psychological constructs were used to test convergent and divergent validity. This study supports the WB-Pro validity and its usefulness to study well-being and for psychological applications.

## PSYCHOMETRIC PROPERTIES OF 9-ITEMS VERSION OF TEMPORAL SATISFACTION WITH LIFE SCALE (TSWLS) IN ITALIAN CONTEXT

*Andrea Zammitti (Università di Catania)*

Life satisfaction has been conceptualized as a cognitive part of subjective well-being and could be defined as a cognitive and global evaluation of one's quality of life according to chosen judging requirements. Life satisfaction can be divided into three temporal dimensions: past, present, and future. This is advantageous due to the changing nature of the construct; taking a perspective linked to the past, present and future can help to focus on a specific time frame and thus reduce the potential measurement error. The aim of this study was to develop and examine the psychometric properties of the 9-item Temporal Satisfaction With Life Scale (TSWLS) in Italian context. Four studies were conducted: (1) the exploratory factor analysis, that confirmed a 3-factor factorial structure; (2) the confirmatory factor analysis, that confirmed the three-factor structure with an high-order factor; (3) the concurrent validity that showed that the scale was significantly and positively related with life satisfaction, flourishing, and positive affects, and negatively related with negative affects, and (4) the stability of the TSWLS using the test-retest method after a 3-weeks.

## EVALUATION OF DOMAIN-SPECIFIC SATISFACTION IN HIGH SCHOOL AND COLLEGE CONTEXT

*Ernesto Lodi (Università degli Studi di Sassari), Patrizia Patrizi (Università degli Studi di Sassari)*

Well-being can be considered as a multidimensional construct involving multiple life domains. In recent years there has been a significant increase in studies on experienced well-being in specific contexts with particular value (f.e. schools and universities) for the realization of people's career and life projects. Academic satisfaction can be defined as the enjoyment of one's experiences related to the student's role and involves the achievement of academic objectives and aspirations. Therefore, school and university satisfaction can play a key role in defining the level of quality of student's life. The aim of this contribution is to present both College Satisfaction Scale (C Sat) and the High-School Satisfaction Scale (H-Sat) that measure in a multidimensional perspective college and school satisfaction. The scales consist of 20 items, 4 for each area of satisfaction: Adequacy of student's choice, Quality of university (or school) services, Relations with colleagues, Quality of study habits, Usefulness for the future career. Moreover, two studies will be presented, they used the C-Sat to demonstrate the mediating role of domain-specific satisfaction between: a) positive resources and general well-being indices; b) risk intelligence and positive perceptions about future work

## THE ROLE OF COURAGE IN SUBJECTIVE WELL-BEING: RESEARCH ON CAREER CONSTRUCTION AND WORKING BEHAVIOR

*Paola Magnano (Università degli Studi di Enna 'Kore'), Ernesto Lodi (Università degli Studi di Sassari), Laura Francesca Scalas (Università di Cagliari), Andrea Zammitti (Università di Catania)*

In the context of psychological literature, the role of courage has only recently been considered; in fact, the definition of courage is still subject of investigation. The more recent conceptualizations of courage agree in including three aspects: the presence of fear, the intentionality of the action, and a significant goal. As career transitions and managing a job are increasingly challenging experiences, today, there is a growing interest in exploring the role of courage in facing changes in professional careers, in an uncertain, unpredictable, and risky context. The present contribution will report a review on recent studies, conducted on workers and future workers, that have deepened the relationships between courage and other career-related and work-related psychological dimensions (career adaptability, career readiness, employability, meaningful work), and the role played by courage in affecting subjective wellbeing, domain-specific wellbeing (i.e., academic) and quality of life.

# THE DARK SIDE OF THE WEB: PERCEPTIONS AND REPRESENTATIONS OF CYBERBULLYING AND GAMING ADDICTION

*Proponente: Maria Assunta Zanetti (Università di Pavia)*

For adolescents the digitized sociality hides more than a few pitfalls. If on the one hand distance and accessibility no longer constitute in any way a limit for the construction and maintenance of social relationships, as happened during the recent lockdown periods, on the other hand we are witnessing a trend for which virtual contacts become predominant over real ones, being in fact preferred to face-to-face meetings. Virtual sociality is accompanied by the risk for subjects in developmental age to experience alienation from real life, social exclusion, violence and to develop risky behaviors related to exposure to maladaptive behavior patterns (Nesi, 2020; Allen, 2014). Our symposium aims at exploring the dark side of digitalized sociality, by taking into account its several facets: cyberbullying, addictive behaviors, as well as socialization to violence and to the best way to cope with it. The different methodological approaches adopted by the studies taking part to the symposium account for a plurality of theoretical models whose integration can further our understanding of risk as well as protective factors, with the aim to devise more effective interventions against the negative side of digitalized sociality.

## UNDERSTANDING CYBERBULLYING: APPLICATION OF THE NEW DEFINITION

*Demis Basso (Facoltà di Scienze della Formazione, Libera Università di Bolzano), Francesca Sangiuliano Intra (Facoltà di Scienze della Formazione, Libera Università di Bolzano)*

According to the new definition of bullying and cyberbullying proposed by Unesco (2021), bullying and cyberbullying occur within a given network of school and community relationships, and are enabled or inhibited by the social and institutional context of schools and the education system. These relational phenomena occur within a network of people and often imply an absence of effective or positive responses and care towards targets by peers and/or adults. This study explores the social context (such as social norms, positive attitude toward violence and toward the bully and the cyberbully) wherein cyberbullying happens, by applying and operationalizing the new definition proposed by Unesco. A paper and pencil questionnaire was administered to 553 adolescent students from Southern Italy (55% Females; age range 14-19). It evaluated: attitudes toward cyberbullying, subjective and social norms, evaluation of the cyberbully as a role model, and school culture against aggression. Loglinear regression on cyberbullying perpetration shows that peer social norms approving and enacting cyberbullying strongly predicted cyberbullying perpetration. The results will allow to explore the difficulties and potentialities of the new definition of bullying and cyberbullying proposed by Unesco.



## CYBERBULLYING AT THE TIME OF COVID 19 AND DISTANCE LEARNING: A SURVEY OF CHILDREN AND ADOLESCENTS

*Carlo Marinoni (Università di Pavia), Maria Assunta Zanetti (Università di Pavia)*

An excessive and distorted use of social-networks is shown by data reported by Generations Connected (2021). This study aims to investigate the relationship between cyberbullying and the effects of lockdown on psychological wellbeing. A questionnaire was proposed in two versions: children (Group A: 8-11, 1320 students, mean: 10.57) and adolescents (Group B: 12-19, 4338 students, mean: 15.5). The researchers analysed variables related to social exposure, frequency of use, fake profiles, experiences of cyberbullying, perception of parental control. The results show highly significant relationships in group A between “the perception of parental control” and “having a fake profiles” ( $r = ,144^{**}$   $p < .01$ ); in group B there were highly significant relationships between “hour online excluding distance learning” and “perception of being bullied more rispetto al lockdown” ( $r = ,040^{**}$   $p < .01$ ). Within group B, male ( $M = ,11 - SD = ,312$ ), reported significantly higher cyber-victim experiences than females ( $M = ,05 - SD = ,222$ ),  $t(4336) = -6,965$ ,  $p < .05$ . Also in the group B male ( $M = 2,18 - SD = 2,885$ ) reported significantly higher difficulty in returning to school and relating in person than female ( $M = 1,48 - SD = 2,589$ ),  $t(4335) = 8,325$ ,  $p < .01$ .

## STUDENT-PRODUCED COMICS ON CYBERBULLYING: A EUROPEAN CO-PARTICIPATORY PROJECT

*Consuelo Mameli (Dipartimento di Scienze dell'Educazione, Università di Bologna), Laura Menabò (Università di Bologna), Antonella Brighi (Libera Università di Bolzano), Damiano Menin (Università degli Studi di Ferrara), Herbert Scheithauer (Freie Universität Berlin, Germany), Peter Smith (University of London, UK), Trijntje Völlink (Open University of the Netherlands, Netherlands), Noel Purdy (Stranmillis University College, UK), Annalisa Guarini (Università di Bologna), Annalisa Guarini (Università di Bologna)*

This study aimed at giving voice to students from disadvantaged backgrounds using a co-participatory approach. Participants were 59 adolescents aged between 14 and 16 from five European countries who created ten comics to illustrate cyberbullying for a broader audience of peers. We analyzed texts and images according to four primary themes: cyberbullying episodes (types, platforms, co-occurrence with bullying), coping strategies, characters (roles, gender, group membership), and emotions. The content analysis showed that online denigration on social media platforms was widely represented and that cyberbullying co-existed with bullying. Social strategies were frequently adopted and combined with passive and confrontational coping. All roles (cyberbully, cybervictim, bystander, reinforcer, defender) were portrayed among the 154 characters identified, even if victims and defenders appeared in the vignettes more often. Males, females, peers, and adults were represented in all roles. Among the 87 emotions detected, sadness was the most frequently expressed, followed by joy, surprise, anger, and fear. The results have relevant methodological and practical implications, as they emphasize the importance of young people's voices in research and interventions against cyberbullying.

## LOOT BOXES, VIDEO-GAMING AND GAMBLING: A PATH ANALYSIS MODEL WITH ADOLESCENTS DURING THE COVID-19 LOCKDOWN

*Caterina Primi (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze), Francesco Sanson (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze), Maria Anna Donati (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze)*

In the last thirty years, considerable attention has been given to the relationship between gaming and gambling (Delfabbro & King, 2020). In detail, it has been found an overlap between these two behaviours, and that problem gamers had a higher probability of also being problem gamblers compared to social or non-gamers (e.g., Sanders & Williams, 2018). Within this theoretical framework, it has been proposed that loot boxes may represent a point of convergence between gaming and gambling (Brock & Johnson, 2021) because they are gambling-like activities embedded within video games. In our study, we proposed an integrative model of the relationship between loot box use, gaming frequency, gambling frequency, problem video gaming and problem gambling among adolescents. We investigate the model during the COVID-19 related lockdown considering that youth spent more time on videogaming during this period of social isolation. Participants were 1204 adolescents (57% males, mean age = 15.62 years, SD = 6.4) attending different high schools. Results indicated that the use of loot boxes had a significant indirect and positive effect on problem gambling through video gaming frequency, problem video gaming and gambling frequency. Indications for prevention can be derived from this model.

# THE MANY FACES OF INTERPERSONAL SYNCHRONY: CONTEXTS, METHODOLOGIES AND APPLICATIONS

*Proponente: Pietro De Carli (Università degli Studi di Milano-Bicocca)*

Synchrony, a concept used across multiple fields that refers to the measure of coordinated events in «unison», is fundamental in the construction and development of social interaction. Individuals who share an interactive space show a continuous mutual adaptation at a behavioral and physiological level. The present symposium aims at presenting different perspectives on the study of interpersonal synchrony, bringing together diverse fields of psychology. The first contribution (Bizzego, Azhari, Yee Neoh & Esposito) is interested in the computational approaches that allow to study brain to brain synchrony in fNIRS hyper-scanning with applications in mother child interaction. The second contribution (Logrieco, Spinelli, Lionetti & Fasolo) focuses on mother child dyads studying behavioral, physiological and neural synchrony to explore emotion regulation in children. The third contribution (Gregorini, De Carli & Preti) uses a computerized tapping task to study the associations between subjects' ability to synchronize their behaviors with an interactive partner and their dysfunctional personality traits. The fourth contribution (Kleinbub, Cariolato & Palmieri) shows how providing therapists with a biofeedback on the synchronization with their patients improve their own empathy levels.

## METHODS AND TECHNOLOGIES TO STUDY INTER-PERSONAL SYNCHRONY IN PARENT-CHILD DYADS

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Despite huge advancements in physiological data acquisition and growing importance of inter-personal research, few studies elucidate the role of computational methods to measure reliable synchrony measures. We discuss some key theoretical and practical concepts about methodological aspects to compute synchrony from physiological signals, starting from recent studies that use functional Near InfraRed Spectroscopy (fNIRS). We introduce opportunities and open issues of the use of fNIRS within hyper-scanning settings, to quantify synchrony of brain response. We study the association between parenting stress and inter-brain synchrony in the prefrontal cortex (PFC) of 31 mother-child and 29 father-child dyads engaging in shared play, coded into segments of joint and non-joint behaviors. We present a method to measure synchrony in unstructured experimental designs, which tested three different strategies and considered the effect of the length of the segment. Parent-child dyads with more parenting stress exhibited greater inter-brain synchrony in the frontal left cluster of the PFC, but only for the 35 s length segments ( $\rho = 0.955$ ,  $p < .001$ ,  $N=11$ ). We will finally discuss how open science practices are an essential ingredient in the development of inter-personal synchrony studies.

## MOTHER-INFANT BIO-BEHAVIOURAL SYNCHRONY: ASSOCIATIONS AMONG BEHAVIOURAL, PHYSIOLOGICAL AND NEURAL SYNCHRONY DURING FACE-TO-FACE INTERACTIONS AT 3 MONTHS OF INFANT AGE

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Parent-child positive synchrony refers to a type of interaction that is mutually regulated, reciprocal, and harmonious, a fundamental experience for infants to promote several developmental goals. Synchrony between mothers and infants during social interaction occurs at a behavioural, physiological and neural level, all levels concurring to a process of co-regulation. While the effects of each level of synchrony separately were previously explored, no studies examined all the three levels simultaneously and their interplay. With the present contribution, we aim to present a way of examining dyadic bio-behavioural synchrony during spontaneous face-to-face mother-infant interactions at 3 and 6 months of infant age. Behavioural synchrony was examined by coding patterns of co-regulated attention and affect. Physiological synchrony was examined by computing and correlating infant and mother RSA values. Neural synchrony (only at 6 months) was computed by correlating each partner frontal EEG asymmetry scores. Patterns of synchrony were examined at different intervals to describe dynamical changes during the interaction. Results evidenced inter-levels associations among synchrony indexes with parallel variations over time. A methodological and empirical discussion will follow.

## INTERPERSONAL SYNCHRONY AND BORDERLINE PERSONALITY TRAITS: THE ROLE OF PATHOLOGICAL PERSONALITY FEATURES IN COOPERATION

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Being in synchrony - an interpersonal coordination process mediated by social cognitive mechanisms - is a key element for successful interactions. Research on the role of individual differences in establishing synchronized interactions is scarce. We aim to consider the role of borderline personality traits during a real-time interaction with different levels of flexible adaptation with a cooperative partner. Participants (N = 206) were recruited from the general population. Borderline personality traits were assessed, and interpersonal synchronization was measured with a finger-tapping task. Participants interacted with a virtual partner (VP) that modulated its timing by a parameter ( $\alpha$ ) varying from no adaptation to the participants to complete adaptation in different conditions. After each condition, participants rated their perception of synchrony and emotions. Results showed that borderline personality features moderated the effect of conditions on the accuracy of synchronization performance. These findings point to difficulties connected with borderline traits in establishing and living interactions that require high social-cognitive processes to be effective. The implications of these findings for future research are outlined.

## INTERPERSONAL BIOFEEDBACK ENHANCING EMPATHY IN THE CLINICAL DYAD

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Empathy is considered a fundamental component of therapeutic relationships. We developed an innovative biofeedback device informing clinicians about real-time physiological synchronization with patients. Autonomic synchrony has been proposed as a biomarker of affective empathy and was reported being associated to alliance and therapy outcome. Accessing this information could enhance therapists' comprehension of patients and interpersonal dynamics. A validation study was designed with 40 dyads engaging in a 20-minute clinical roleplay. Clinicians in the experimental group receive haptic synchrony feedback. After the roleplay, objective and self-reported therapists' empathy is assessed. Results on preliminary data ( $n = 13$ ) showed a large ( $d = 1.1$ ) and significant ( $\alpha = 0.1$ ) difference in mean objective empathy between groups ( $t[7.9] = -2.08$ ;  $p = 0.071$ ), with, but not in self-reported empathy. Differently from other strategies (supervision, bug-in-the-ear, etc.) this technology is cost effective, objective, and relies on implicit learning. If early results are confirmed, it might represent a valuable contribution to clinical relationship practices. Furthermore, it may enable experimental manipulation of empathy and physiological synchronization in ecological settings.



# THE SELF-DETERMINATION THEORY APPROACH ACROSS DIFFERENT PSYCHOLOGICAL DOMAINS: A FOCUS ON INTER-INDIVIDUAL RELATIONSHIPS

*Proponenti: Francesca Liga (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina), Francesca Cuzzocrea (Università degli Studi 'Magna Græcia' di Catanzaro)*

Self-determination theory is a widely recognized framework for understanding the impact that different motivational process can have on different aspects of well-being. Through our relationships and interactions with others, we can either foster or thwart well-being and personal growth. This symposium is intended to be a contribution to remark how the concept of self-determination may be applied to a wide variety of areas and across different sub-disciplines of psychology using diverse methods. Autonomous motivation to have a child seems to be a protective factor of depression of both partners during pregnancy as shown in the study of Gugliandolo et al. Considering that sexual motivation is particularly effective in promoting the well-being of partners, Ingoglia et al. aims at testing the validity and reliability in the Italian context of the SexMS, a measurement of the motivation to engage in sexual relationships. Barberis et al. put in evidence an association between maternal psychological basic needs and child anxiety mediated by maternal psychological control and anxiety. Finally, the study of Nicolotti&Magrin aims at investigating the relationship of parental autonomy support and warmth with authentic functioning, psychological well-being, and symptoms among emerging adults.

## DIFFERENCES BETWEEN LEVELS OF MOTIVATION AND PRE-NATAL WELL-BEING: A DYADIC RESPONSE SURFACE ANALYSIS (DRSA) APPROACH

*Maria Cristina Gugliandolo (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina), Martina Gallo (Dipartimento di Scienze della Salute, Università degli Studi 'Magna Græcia' di Catanzaro), Rosalba Larcan (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina)*

During pregnancy partners may differ in their psychological functioning, with some parents more at risk for stress or depression. Since this period is potentially predictive of postpartum adjustment, this study investigates the protective role of motivation using a dyadic approach grounded in Self-Determination Theory. 301 expecting mothers (age:M=32.33, SD=5.16) and fathers (age:M=35.04, SD=6.10), engaged in a stable relationship, filled out: Motivation to Have a Child, Perceived Stress Scale, and Center for Epidemiologic Studies Depression Scale. Significant differences in perceptions of stress and depressive symptoms were found, with mothers reporting higher scores. Higher levels of motivation were negatively associated with stress and depression of both partners. To examine the impact of the dyadic (dis)similarity between partners on motivation to the levels of stress and depression of both partners, a DRSA was used. Overall, the results showed that in both partners the higher autonomous motivation rather than matching in motivation between partners showed a negative association with stress and depression. This study suggests the importance of high autonomous motivation for future parents as a protective factor in this period of life.

## ITALIAN VALIDATION OF THE SEXUAL MOTIVATION SCALE (SEXMS): A MULTILEVEL APPROACH

*Sonia Ingoglia (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Cristiano Inguglia (Università degli Studi di Palermo), Giusy Danila Valenti (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo)*

The Sexual Motivation Scale (SexMS) is a 24 item self-report instrument assessing persons' reasons for engaging in their sexual relationships. Grounded on the different types of self-regulation proposed by Self-Determination Theory (SDT), the purpose of this multi-study report was to adapt the SexMS to the Italian context. Two studies were conducted. In Study 1, we evaluated the SexMS dimensionality testing 4 competing models, its measurement invariance across gender, construct validity, and reliability using the technique of Confirmatory Factor Analysis (CFA). Participants were 401 young adults (males = 50%) aged from 20 to 30 years ( $M = 23.05$ ,  $SD = 3.02$ ). In Study 2, we evaluated the SexMS dimensionality in a sample of 200 heterosexual couples aged from 20 to 30 years ( $M = 24.40$ ,  $SD = 2.77$ ) using the technique of Multilevel CFA. Results of both studies showed that the 6 correlated factors model was the best fitting model, the scale was invariant across gender, and can be considered valid and reliable. The SexMS could be considered a promising instrument in the context of SDT-based research that can be used in intervention programs aimed at promoting couples' well-being.

## ASSESSING ANXIOUS SYMPTOMATOLOGY IN YOUNG ADULTS AND THEIR MOTHERS: AN INTERGENERATIONAL STUDY IN THE CONTEXT OF SELF-DETERMINATION THEORY

*Nadia Barberis (Università degli Studi 'Magna Græcia' di Catanzaro), Federica Papa (Università degli Studi 'Magna Græcia' di Catanzaro), Marco Cannavò (Università degli Studi 'Magna Græcia' di Catanzaro)*

Self-determination theory highlighted how psychological basic needs (PBS) are essential for one's mental health and showed how parental psychological control (PPS) may determine low mental health. This study tested the hypothesis that an association between maternal PBS and child anxiety (CA) would be mediated by maternal anxiety (MA), examining also the relations with child PBS and PPC. 150 subjects (Females=86) aged between 13 and 30 ( $M = 21.61$ ,  $DS = 5.33$ ) and their mothers filled a protocol to measure key variables of the study. A Structural equation modeling with latent variables tested a model with Maternal PBS as predictor variable, MA, PPC and Child PBS as mediators, and CA as outcome. Good fit indices were found:  $\chi^2(64) = 68.94$ ;  $p < .001$ , CFI = .99, RMSEA = .02 (90% CI = .00 – .06), SRMR=.04. Significant paths were found from Maternal PBN to MA ( $\beta = -.42$ ) and Child PBN ( $\beta = .23$ ), and from MA to CA ( $\beta = .33$ ), from PPC to Child PBN ( $\beta = -.38$ ) and CA ( $\beta = -.33$ ) Several indirect associations were also found. Interventions aimed at improving young adults' mental health should include parental psychoeducation.

## PERCEPTION OF PARENTS AND WELL-BEING IN EMERGING ADULTHOOD: THE MEDIATING ROLE OF AUTHENTICITY

*Matilde Nicolotti (Università degli Studi di Milano-Bicocca), Maria Elena Magrin (Università degli Studi di Milano-Bicocca)*

The present work takes on the topic of authenticity among emerging adults, reflecting on the role of the family context in supporting authentic functioning and well-being. According to SDT, individual's well-being and growth are supported by social and relational contexts characterized by autonomy support and warmth. The same relational features are fundamental to support authentic functioning. The present study aims at investigating the relationship of parental autonomy support and warmth with authentic functioning, psychological well-being, and symptoms among emerging adults. It is hypothesized that children of parents perceived as autonomy supportive and warm report higher psychological well-being and lower symptoms. It is also hypothesized that authenticity positively mediates this relationship. A sample of 349 university students completed an online survey, collecting information on perception of parents, authenticity, internalizing and externalizing symptoms, psychological well-being. Three mediation models were tested to verify hypotheses. Results support the mediating role of authenticity and underline the relevance of significative relationships characterized particularly by warmth, to sustain authenticity and well-being of youth in this developmental phase.

# THE USE OF PERFORMANCE AND APPEARANCE ENHANCING SUBSTANCE (PAES) IN SPORT: DIFFERENT METHODOLOGICAL APPROACHES FOR DIFFERENT PERSPECTIVES ON THE PHENOMENON

*Proponente: Luca Mallia (Dipartimento di Scienze Motorie, Umane e della Salute, Università degli Studi di Roma Foro Italico)*

Recently the use of PAES was increased worldwide both in competitive and recreational sport settings. The symposium will present four studies focusing on different psychological aspects and mechanisms related to PAES use in sport. Using different methodological approaches (i.e. qualitative, quantitative and mixed) they intended give different perspectives to the phenomenon. The first study (D'Angelo) using a sequential exploratory mixed method design, was aimed to understand European adolescents' attitudes and representations of the use of PAES in recreational sport settings. The second study (Aresi) using a sequential explanatory mixed method was instead aimed to individuate and describe the characteristics of the prototype of illegal PAES' users among adolescents practicing recreational sport. The third contribution (Chirico) describes a large survey conducted in 8 European countries aimed to estimate PAES use and to identify the social-cognitive factors (e.g., moral disengagement) and personal values (e.g., Moral Identity) relevant to PAES use. The last study (Mallia), using a quantitative approach, tested empirically a model hypothesizing that the university athletes' perfectionism might influence their use of legal PAES by the mediating role of the exercise dependence.

## PERSPECTIVES OF CONTROLLED AND UNCONTROLLED PAES AMONG ADOLESCENTS PRACTISING SPORT IN RECREATIONAL SPORT SETTING: A SEQUENTIAL EXPLORATORY MIXED METHODS DESIGN

*Chiara D'angelo (Università Cattolica del Sacro Cuore), Eloisa Cianci (Università Cattolica del Sacro Cuore), Caterina Gozzoli (Università Cattolica del Sacro Cuore)*

DRAWS EU project (Doping Raising Awareness among youths in Sport recreational environments) addresses the goal of combating doping in recreational environments. In the first phase of the project we conducted a sequential exploratory mixed methods design with the aim to understand those psychological, social, contextual, and cultural factors that are related to PAES use. Eight focus groups were conducted (40 participants). First results (thematic analysis with N-Vivo) show the lack of knowledge about substances, and also lack of opportunities to discuss these issues within their contexts. However, the adolescents believe that when illicit behavior occurs, it is often the context that pushes the athletes in this direction. Subsequently an extensive questionnaire guided by preliminary results of the qualitative study was developed and completed by 936 adolescents. Participants reported some degree of susceptibility to doping use: 56.1% would give at least little consideration in any situation. This result suggests that, under certain circumstances there might be chances to initiate doping use. Results also suggest that some social/family factors represent protective/risk factors towards doping susceptibility.

## PROTOTYPE OF ADOLESCENT DOPING USER. A MIXED-METHODS STUDY ON ITALIAN MALE RECREATIONAL ATHLETES

*Giovanni Aresi (Università Cattolica del Sacro Cuore), Amalia De Leo (Università Cattolica del Sacro Cuore)*

This study is part of a larger project on research and education against doping use among adolescents (14-19 years) in recreational sport settings. We used a sequential explanatory mixed methods design (quantitative-qualitative) to describe the characteristics of the prototype of adolescent doping user. In Phase 1, Italian male adolescents (N = 94) were recruited by contacting sport clubs and schools. Participants completed a survey with 39 five-point bipolar adjectives (e.g., one = responsible, five = irresponsible) describing the prototypical image of an adolescent doping user. 14 items with a mean of 4.00 or above were selected and conceptually aggregated into four dimensions: Risk taking, Lack of sportsmanship, Attitude towards competition, and Artificiality. Confirmatory Factor Analyses were conducted to test the statistical validity of these conceptual domains. Phase 2 used focus group interviews with 24 Italian adolescents to elaborate on Phase 1 quantitative results. Thematic analysis indicated that prototype perceptions revolve around themes like physical appearance, practicing sports perceived at risk of doping use, such as cycling or body building, lack of sportsmanship and fairness in competition, as well as propensity to take health risks related to substance use.



## THE RELATIONS OF SOCIAL-COGNITIVE FACTORS WITH VALUES IN DOPING RESEARCH: MERGING INDIVIDUAL AND PREVALENCE DATA FROM A EUROPEAN SURVEY

*Andrea Chirico (Sapienza Università di Roma), Fabio Lucidi (Sapienza Università di Roma), Tommaso Palombi (Sapienza Università di Roma), Fabio Alivernini (Sapienza Università di Roma)*

Doping in recreational sport is a novel research topic, and data based on representative samples merging prevalence, socio-cultural factors, and values are absent. In 2021, the FAIR+ research group conducted a survey in 8 European countries on doping use in recreational sports. The first part of the survey was concerned with prevalence data of doping behavior considering socio-cultural factors (e.g., Gender, Country), while the second part of the survey focused on social-cognitive factors (e.g., moral disengagement) and personal values (e.g., Moral Identity) relevant to doping use. This presentation describes the analyses of a model linking these latter factors and variables, and the findings that ensued, while taking into consideration the prevalence data established on the large-scale survey.

## PERFECTIONISM, EXERCISE DEPENDENCE AND LEGAL PAES USE IN ITALIAN UNIVERSITY ATHLETES

*Luca Mallia (Dipartimento di Psicologia, Sapienza Università di Roma), Alessandra De Maria (Università degli Studi di Roma Foro Italico), Federica Galli (Università degli Studi di Roma Foro Italico), Thomas Zandonai (University of Elche, Spain), Ana María Peiró (University of Elche, Spain), Arnaldo Zelli (Università degli Studi di Roma 'Foro Italico'), Pablo Monteagudo Chiner (Department of Education and Specific Didactics, Jaume I University, Spain)*

Empirical evidence suggests that perfectionism may explain individual differences contributing to PAES use in sport. The current study examines the relations of the two perfectionism dimensions of strivings (PS) and concerns (PC) with athletes' legal PAES use via the intervening mediating relations with exercise dependence. Italian university athletes (N=256, 21±2 years, 62.9% male) completed an online survey. The hypothesized relations were tested applying a variance-based structural modeling equation (VB-SEM). VB-SEM analyses showed a good fit with the data (GoF=.37; APC=.18,  $p<.001$ ; ARS=.19,  $p<.001$ ; AFVIF=1.28). PS and PC were significantly and positively related to exercise dependence ( $\beta=.26$  and  $\beta=.46$ ). In turn, exercise dependence significantly and positively influenced PAES use ( $\beta=.14$ ). Although no direct effects emerged for perfectionistic dimensions, PS and PC had positive and significant indirect effects via exercise dependence on supplementation ( $\beta=.04$  and  $\beta=.06$ ). The findings raise the possibility that anti-doping educational programs might benefit from considering perfectionism among the key factors affecting athletes' decisions about substances.

# A MULTIFACETED APPROACH TO THE IMPACT OF SOCIAL MEDIA USE: FROM A WAY OF BEING TO THE CONTRIBUTIONS TO UBIQUITOUS SOCIAL CONTEXTS

*Proponente: Flora Gatti (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

This symposium endeavors to unravel the impact of social media and mobile devices on social processes and interpersonal relationships considering the different levels it implies (individual, interpersonal, intergroup, and community). The first contribution deepens social media use as a way of being among younger users and its implications in a clinical perspective. Then, the changes it brought about as to already existing social dynamics (e.g., social contacts, prejudices) are disentangled: the second contribution addresses online group dynamics by replicating Schachter's study (1951) about the reactions to a deviant member, while the third one focuses on online intergroup contacts among different ethnic groups and on the role of the perceived social presence in this. Last, the new social processes allowed by the specific affordances of modern social media – which blur the boundaries between online and offline contexts – are deepened in the fourth contribution. Specifically, it addresses citizens' experience of their local communities as ubiquitous ones – i.e., compounded by social interactions and opportunities related to both online and physical environments – due to their use of location-based social media. The main calls for future research and intervention will be outlined.

## QUESTIONING SOCIAL MEDIA USE AND MISUSE FROM A CLINICALLY ORIENTED PERSPECTIVE. REFLECTIONS STARTING FROM HETEROGENEOUS DATA COLLECTION

*Valentina Boursier (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II),  
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Young people's engagement in Internet-related activities has become increasingly pervasive. The spread of user-generated content provided opportunities for self-disclosure and self-promotion thus feeding people's need for attention-seeking. Furthermore, the easy access to online social interactions meet individuals' need to belong. In this regard, SNSs use has been experienced as a way of being, even though potentially leading to risky opportunities. Accordingly, scholars' interest has been particularly addressed to the social media problematic use thus contributing to the scientific debate on the conceptualization and measurement of new behavioral addictions. Hence, the need to differentiate psychological/psychopathological processes underlining online behaviors partially responded to the lack of a clear identification of what may contribute to defining them excessive or dysfunctional. Starting from heterogeneous data collected on the association among adolescents' and young adults' problematic social network use and body image control, personality, and individual functioning, we propose a clinically oriented reflection on potentially risky as well as protective factors that contribute to identifying individuals' quality of social media use, serving specific psychological needs.

## REJECTION, DEVIANCE, AND COMMUNICATION IN ONLINE DISCUSSION GROUPS

*Nicolas Aureli (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

In recent decades, an ever-increasing part of our social interactions is mediated by digital tools. Despite this, the social dynamics that arise within online discussion groups are still little explored. Here, we conducted a replica of Schachter's classic study (1951) on reactions to a deviant member in an online context. Online group discussions were conducted where participants were asked to discuss a case. Each group was made up of 5 to 7 participants and 3 confederates playing distinct roles: the mode that followed the majority opinion for the entire discussion, the slider that initially took an extreme position and then followed the group, and the deviate who held the opposite position to the majority of the group. In line with the classical study (Schachter, 1951), we observed that the deviate was the most rejected. However, some specificities also seem to emerge, in particular concerning the number of communications acts addressed to the deviate during the entire discussion group which did not seem to decrease as was observed in the original study. Similarities and differences in reactions to deviance in offline and online groups will be discussed about the characteristics of digital environments.

## ONLINE CONTACT AND ETHNIC PREJUDICE REDUCTION. THE ROLE OF SOCIAL PRESENCE PERCEPTION

*Chiara Imperato (Università di Parma), Yair Amichai-Hamburger (Research Center for Internet Psychology, Reichman University, Israel), Tiziana Mancini (Università di Parma)*

Contact Hypothesis has been successfully applied to online contexts, despite processes by which intergroup contact reduces prejudice are still not clear. Starting from such gap, the aim of this study was to understand whether and how online intergroup contact between individuals belonging to different ethnic groups was related to attitudes, both analyzing majorities (i.e., White people) and minorities (i.e., Black people). Specifically, the present study analyzed the role of social presence perception during online intergroup contact, the inclusion of other in the self, and the ethnic identity understood as variables able to explain the online intergroup contact effects on prejudice reduction. The participants were asked to online interact with a fake outgroup member on a chatroom ad-hoc created. The final sample was composed by 267 undergraduate students ageing from 18 to 51 years ( $M = 22.19$ ,  $SD = 4.90$ ;  $n$  females = 162;  $n$  majority = 137). Results showed that, regardless of whether individuals belonged to majority or minority group, perceived social presence play an important role in promoting positive intergroup relationships, favoring the inclusion of the other in the self, the positive attitude towards the outgroup member, and the ethnic identity.

## THE SOCIAL ADDED VALUE OF USING PEOPLE-NEARBY APPLICATIONS WITH COMMUNITY-RELATED AIMS: DISENTANGLING UBIQUITOUS LOCAL COMMUNITY EXPERIENCES

*Flora Gatti (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Fortuna Procentese (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Local community experiences have become increasingly complex due to the spread of location-based social applications, which blur the boundaries between online and offline environments opening new relational, identity, and social opportunities. This contribution specifically deepens the paths through which the community-related use of dating People-Nearby Applications (PNAs, e.g., Tinder, Grindr) can impact users' neighborhood experience. An online survey was administered to 595 Italian and Dutch users to detect their use of such applications with community-related aims, bridging and bonding social capital, feeling of involvement in their neighborhood community, and Sense of Community (SoC). A multiple mediation model was run with Structural Equation Modeling. Dating PNAs neighborhood-related use only showed a direct effect on users' social capital and, through this, an indirect one on their SoC. This suggests the need to further look into the complexities brought about by local community experiences becoming ubiquitous as well as into the theoretical and practical implications stemming. A better understanding of the new, ubiquitous, paths through which citizens experience their neighborhoods could open new opportunities for interventions aimed at gluing the local social fabric.

## ANTECEDENTS AND CONSEQUENCES OF DYSFUNCTIONAL PARENTING: THE ROLE OF FAMILY PATHWAYS

*Proponenti: Elena Camisasca (Università eCampus), Sarah Miragoli (Università Cattolica del Sacro Cuore)*

This symposium is focused on the quality of the parent-child relationship to deepen the topic of dysfunctional parenting. Research described several dysfunctional parenting behaviors and indicated their impact on children's adjustment. Recently literature has highlighted and operationalized some features of dysfunctional parenting and indicated how the investigation of their antecedents and consequences is an area worthy of exploration. Two reports (Marchetti et al.

*Miragoli & Camisasca) of the symposium considered the antecedents of maternal burnout and parent's child abuse potential. The authors investigated the indirect effects of individual psychological variables on the two forms of dysfunctional parenting. The other two reports (Laganà et al. Verrastro et al.) investigated the consequences of dysfunctional parenting on children and youth's psychological adjustment. The first report (Laganà et al.) focused on parental psychological control and it is aimed to advance knowledge about its impact on children's psychological adjustment. The last report (Verrastro et al.) focused on a group of justice-involved juveniles and explored the impact of dysfunctional family relations on youths' delinquent behavior.*



## EXPLAINING MATERNAL BURNOUT: THE ROLE OF DEPRESSIVE SYMPTOMS THROUGH THE PARALLEL MEDIATION OF PARENTAL DISTRESS AND PARENT-CHILD DYSFUNCTIONAL INTERACTION

*Daniela Marchetti (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Lilybeth Fontanesi (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Antonio Pio Facchino (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Mario Fulcheri (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Maria Cristina Verrocchio (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Chronic exposure to emotionally draining environments may result in parental burnout (PB), a syndrome characterized by emotional exhaustion, emotional distancing, and a decreasing sense of parental accomplishment. Many factors can influence PB, such as depressive symptoms, family factors, and parental distress. We investigated the relationship among the mentioned variables in a sample of 401 mothers ( $M=38.87\pm 6.25$ ) of children aged 0-12, through an online survey that included information about family characteristics and self-reported measures of parental burnout (PBI), depressive symptoms (PHQ-9), parent-child dysfunction interaction (PSI-PCDI), and parental distress (PSI-PD). Parallel mediation analysis with depressive symptoms as predictor, PB as outcome and parental distress and parent-child dysfunctional interaction as mediators was computed. The presence of a child with special needs and the lack of support in child-care were included as covariates. Mothers with higher levels of depressive symptoms showed higher levels of PB. The mediation role of parent-child dysfunctional interaction and parental distress between depressive symptoms and PB was also significant. Results may be relevant in the screening of parents at risk of PB with implications for prevention and treatment.

## PATHWAYS AMONG PERCEIVED CHILD'S BEHAVIORAL PROBLEMS, NEGATIVE CO-PARENTING, AND CHILD ABUSE POTENTIAL: THE EMOTIONAL DYSREGULATION-DRIVEN MODEL

*Sarah Miragoli (Università Cattolica del Sacro Cuore), Elena Camisasca (Università eCampus)*

Researchers have examined how parents' emotional dysregulation could negatively affect the quality of the caregiver-child relationship, leading to potential child abuse. In this line of research, the investigation of the families' pathways by which high levels of parents' emotional dysregulation could affect their child abuse potential it is an area worthy of further exploration. Using a sample of 517 Italian parents and their school-aged children (44% males) we investigated the dynamic pathways linking parents' emotional dysregulation (DERS; X) to child abuse potential (Y), by considering perceived child's behavioral problems (CBCL; M1) and negative co-parenting (CRS; M2) as mediators. Mediation analyses showed how parents' emotional dysregulation was linked to child abuse potential through a series of pathways. In the first one, emotional dysregulation was associated with child abuse potential through the mediation of M1. In the second one, emotional dysregulation was linked with child abuse potential through the mediation of M2. The third pathway indicated that the indirect pathway passed from emotional dysregulation (X) to child abuse potential (Y) through the 0perceveid child's behavioral problems (M1), which, in turn, affected the negative co-parenting.

## AUTONOMOUS MOTIVATION, PARENTING AND OUTCOMES OF CHILDREN BETWEEN 4 AND 6 YEARS

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The application of the self-determination theory in the domain of parenting has widely shown the role of psychological control and autonomy support in the development of children (Ryan, & Deci, 2017). However, studies on the antecedents of parenting in couples of parents with children in the pre-school years are still limited. Therefore, this research aims at examining the possible associations of parental motivation, parental autonomy support, parental psychological control and parents' reports of preschool children' outcomes. 150 couples of parents with at least one child from 4 to 6 years old participated at this study. Results of the model suggest that for both parents autonomous motivation for parenting was positively associated with autonomy support, while controlled motivation for parenting was positively associated with parental control. Differently, psychological control was positively associated with parental report of anxiety and anger and autonomy support was positively associated with parental report of social competence. Finally, some associations across partners are visible. These findings highlight the importance of parental autonomous motivation for the development of supportive parenting practices and for the positive development of pre-schooler children.

## JUVENILE DELINQUENCY AND AGGRESSIVE BEHAVIOR: THE INFLUENCE OF THE FAMILY SYSTEM

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Our research aims to analyze the impact of family communication and parental relationships in a group of justice-involved juveniles and a group of students. The sample is characterized of 86 adolescents from the Youth Correctional Facilities and 86 students from three high schools in southern Italy (age range: 14 -19). Participants filled out the following protocol: Aggression Questionnaire; Attachment Style Questionnaire; Family Communication Scale. From the analysis of illicit conduct, a greater tendency towards physical and verbal aggression (65.9%) and involvement in fights (62.8%) emerges in the justice-involved juveniles' group. The social background is perceived as more criminogenic by the justice-involved juveniles, and they have more detached relationships with their parents; 47.7% did not spend time at home before incarceration, compared to 72.1% of students; 97.8% declare that they have one parent with a criminal record, compared to 2.2% of students. A positive correlation emerges between secure attachment and good family communication and between avoidant attachment and aggressive behavior. Results show the importance of family relationships in youths' illegal behaviors and provides practical implications for adolescent's deviant behaviors.

# CONNECTING PEOPLE AND IDEAS FROM PSYCHOLOGY AND STATISTICS: THE PSICOSTAT EXPERIENCE

*Proponente: Giulia Calignano (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Psychology is a multilevel and multicomponent discipline, and psychologists cannot avoid to adopt an interdisciplinary perspective to explain human mind and behavior. Nonetheless, psychology is still jeopardized by irregular examples of collaborations among disciplines. Such short-sighted sectorization has dramatically reduced the plausibility of some psychological theories neglecting the advancement in complementary areas. The first talk of this symposium introduces the successful example of Psicostat, an interdisciplinary group of Psychologists and Statisticians (counting 150 followers from several Universities in and out of Italy) that practices a continuous collaboration since 2016. The second talk presents a concrete example of a Psicostat collaboration between Statisticians and Neuroscientists. The third talk describes how discussions prompted by the Psicostat framework contribute to rethink data modeling, showing flexible generalizations of the Rasch model. The last talk presents a tangible improvement yielded through the collaboration of researchers from Statistics and Occupational Health Psychology. The discussion will highlight the impact of the Psicostat experience on both theory and practice in Psychology.

## INTRODUCING THE PSICOSTAT GROUP EXPERIENCE

*Gianmarco Altoè (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

In 2016, a small group of statisticians and psychologists based at the University of Padova decided to join forces and create an interdisciplinary group called “Psicostat”. The aim was to promote a concrete link between the two scientific disciplines in order to foster the progress of research. After the first difficulties, mainly related to the different approaches, technical language, and sensitivities of each discipline, Psicostat raised a certain interest and sympathy. It grew quickly, involving students and scholars also from outside Padua and Italy. In this talk, I will focus on the benefits of the main activity organized by Psicostat: the bi-weekly informal meetings in which questions, problems, (emerging) ideas and projects, psychological theories, statistical methods, software and, occasionally, political visions of science are presented. These meetings are free, there are no restrictions based on the academic level of the speakers or attendants and, most importantly, a substantial part is dedicated to open discussion. Our experience suggests that, rather than having independent main effects on the progress of science, Psychology and Statistics together produce a multiplicative interaction effect ... And it can be fun!

## A STATISTICAL PERSPECTIVE ON FMRI ANALYSIS: INFERRING NEURAL ACTIVATION FROM BRAIN IMAGING DATA

*Anna Vesely (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Functional Magnetic Resonance Imaging (fMRI) analysis aims to assess brain activation under a sequence of cognitive stimuli of interest. Activation is measured from the correlation between the stimuli and blood oxygenation levels. Such measure is taken at the level of voxels, i.e., around 300,000 small volume units that compose the brain image. In this setting, data has a high-dimensional structure, as the number of voxels under study is generally much larger than the number of observations. Furthermore, even though each voxel may be analyzed individually for significant neural activity, researchers are usually interested in detecting, and possibly localizing and quantifying, significant activation within several brain regions (subsets of voxels). In this contribution, I introduce the statistical challenges that arise from this framework, as well as a new methodological approach that gives lower confidence bounds for the proportion of truly active voxels (true discovery proportion, TDP) within any brain region.

## THE RASCH MODEL: QUESTIONNAIRES AND BEYOND

*Ottavia M. Epifania (Università Cattolica del Sacro Cuore - Università degli Studi di Padova)*

In most researchers' mind, the Rasch model is associated with the analysis of questionnaires. Its use for analyzing other types of data is often underappreciated, potentially because of the strong assumptions on which it rests. However, if one rethinks the Rasch model as a linear model, its applicability goes beyond questionnaires, making it suitable for the analysis of complex data structures, such as those of some implicit measures, and of responses beyond accuracy, such as response times. In this contribution, I illustrate the similarities between the Rasch model and the Generalized Linear Model (GLM), as well as its extension to Generalized Linear Mixed-Effects Models for obtaining a Rasch-like parametrization of the data while accounting for the random variability.



## MULTIMETHOD APPROACH AND INTENSIVE LONGITUDINAL DESIGNS IN OCCUPATIONAL HEALTH PSYCHOLOGY: TOWARDS A BETTER UNDERSTANDING OF THE INDIVIDUAL FUNCTIONING AT WORK

*Luca Menghini (Università di Bologna)*

Organizational research, and particularly Occupational Health Psychology, has traditionally employed cross-sectional designs and self-report measures to understand the individual functioning at work, such as the appraisal of psychosocial work characteristics, the related emotional and behavioral responses, and relationships with organizational-level variables (e.g., HR management practices). Although psychometrically sounding and impacting research has been conducted, the prevalent use of these research techniques substantially limited the understanding of the individual functioning at work. Particularly, conclusions at the individual level have been often drawn from group comparisons (ecological fallacy), implicitly assuming the equivalence between inter- and intraindividual covariance structures (ergodicity), while self-reports notably suffer from several biases. In this contribution, based on data from three empirical studies, I illustrate recent methodological (e.g., intensive longitudinal designs, ecological momentary assessment) and statistical perspectives (e.g., generalized linear mixed-effects models, cross-level isomorphism) to overcome these limitations and achieve a better understanding of the individual functioning at work.

# DIFFERENT PATTERNS OF SMARTPHONE USE AND THEIR IMPACTS ON PSYCHOSOCIAL WELL- BEING: PERSPECTIVES FROM SOCIAL AND CLINICAL PSYCHOLOGY

*Proponente: Luca Pancani (Università degli Studi di Milano-Bicocca)*

The widespread diffusion of smartphones has opened new challenges related to the psychological consequences of their usage. The present symposium aims at offering an overview of the smartphone's impacts on well-being from the perspective of social and clinical psychology. The first speech presents four typologies of undergrads smartphone users based on smartphone impacts in everyday life, showing their association with personality traits and psychopathological symptoms. The second speech shows different profiles of adolescents based on their objective and perceived smartphone use (e.g., time spent on apps), examining the links of profiles with emotional experiences and psychological distress. The third speech investigates adolescents' smartphone and social media use during the COVID-19 pandemic, identifying how different patterns of usage predict social media addiction. The fourth speech presents two studies that investigate phenomena in which smartphone use (or non-use) results in experiences of social exclusion: phubbing, ghosting, and orbiting. Overall, through different methodologies and theoretical frameworks, the present symposium highlights a wide range of side-effects related to smartphone use, encouraging reflections and providing new perspectives for future research.

## HETEROGENEITY OF THE IMPACT OF SMARTPHONE USE ON EVERYDAY LIVES AND ITS RELATIONSHIP WITH PSYCHOLOGICAL FACTORS

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Despite smartphone use can have various types of impact on everyday lives (e.g., unregulated usage, preference for smartphone-mediated social relationships), research examining the co-occurrence and relationships between these impacts is still scarce. The aim of the present study was to identify profiles of smartphone users according to different types of smartphone impact and to compare these profiles in terms of personality and psychopathological variables. Undergraduate students (n=934) completed online self-report measures of psychopathological symptoms, self-esteem, impulsivity traits and the impact of smartphones on different domains (cognitive, affective, social, and behavioral). Latent profile analysis identified four latent profiles of smartphone users: users with low smartphone impact, users with average smartphone impact, problematic smartphone users and users favoring online interactions. Problematic smartphone users were characterized by heightened psychopathological symptoms (stress, anxiety, depression, obsessive-compulsive disorder tendencies) and impulsivity traits. Moreover, users who preferred online interactions were socially anxious and had lower self-esteem. Practical implications are discussed.

## PATTERNS OF ADOLESCENTS' SMARTPHONE USE: ARE THEY LINKED TO PSYCHOSOCIAL DISTRESS?

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Although screen-based activities are embedded in adolescents' daily lives, the link between their smartphone use (SU) and psychological well-being is still unclear. The study aims to: a) empirically determine homogeneous groups of adolescents based on their SU, online social comparison, social media addiction, emotion regulation and self-esteem; and b) to examine the level of distress across the empirically derived profiles. 340 teens (Mage=15.61, SD=1.19) provided data on perceived and objective SU (time spent on smartphone and apps), social media addiction (BSMAS), online social comparison (INCOM), difficulties in emotion regulation (DERS), self-esteem (RSES) and psychological distress (CORE-YP). Latent Class Analysis (LCA) was used to classify the participants into three groups (with low, mild and high problematic SU). Individuals in the high problematic SU group reported greater difficulties in emotion regulation and social media addiction, whereas individuals in the low problematic SU group showed lower SMU intensity. Adolescents who scored higher on the CORE-YP had higher odds to be in the high problematic SU group. The results of this study may provide a more comprehensive picture of adolescent's psychological distress associated with different profiles of SU.

## SMARTPHONE AND SOCIAL MEDIA USE CONTRIBUTED TO INDIVIDUAL DIFFERENCES IN ADOLESCENTS' PSYCHOLOGICAL AND SCHOOL ADJUSTMENT DURING THE COVID-19 PANDEMIC

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Adolescents in remote education during the COVID-19 pandemic had few opportunities to meet in person, leading to an increase in social media use. However, excessive use may promote behavioral addictions towards these platforms, with negative consequences for adolescents' well-being. In this study, we examined the impact of different social media applications on social media addiction, school achievement, and emotional well-being. The sample consisted of 777 Italian adolescents (Mean age. 14.10, SD = 2.22). The contribution of smartphone and social media use in predicting social media addiction, school achievement, and emotional well being was determined using machine learning algorithms. Overall, time spent on smartphone was a strong predictor of all investigated outcomes. Additionally, use of TikTok was the strongest predictor of perceived social media addiction, while Facebook and YouTube use had the strongest association with adolescents' current happiness. All investigated social media apps played a role in explaining individual differences in school achievement (school grades), except for Instagram, Twitter, and WhatsApp use. Overall, smartphone and social media use played a significant role in adolescents' school and psychosocial adjustment during the COVID-19 pandemic.

## SMARTPHONE AND DIGITAL OSTRACISM: THE PHENOMENA OF PHUBBING, GHOSTING, AND ORBITING

*Luca Pancani (Università degli Studi di Milano-Bicocca), Paolo Riva (Università degli Studi di Milano-Bicocca)*

Nowadays, many of our daily interactions are mediated by smartphones. However, these devices can also disconnect people. The present research focuses on three phenomena in which smartphone use and non-use lead to social exclusion. In Study 1 (N=291), we investigated phubbing, the act of ignoring someone because of the phone. Participants had to identify themselves in a vignette, chatting with an avatar. A 3 (between-subject: avatar's direct gaze, distraction with a cup, phubbing) by 2 (within-subject: trivial vs. serious topic) experimental design showed that phubbing had more negative consequences on several aspects of well-being, especially when the topic was serious. In Study 2 (N=176), participants were asked to recall an episode in which they were victims of ghosting (unilateral and sudden breakup without explanations, avoiding any further communication), orbiting (as ghosting, but characterized by subsequent unilateral contacts online), or rejection in a between-subject design. Results showed crucial differences in the typical outcomes threatened by ostracism (e.g., emotions, psychological needs, aggressive inclination) among the three conditions. The findings are discussed in the light of social exclusion literature, highlighting the specificities of digital ostracism.

## EARLY LIFE EXPERIENCES AND DEVELOPMENTAL TRAJECTORIES: NEW CHALLENGES AND FUTURE PROSPECTS

*Proponente: Angela Costabile (Dipartimento di Culture, Educazione e Società, Università della Calabria)*

Recent advances in the field of infant research offer a new perspective on how some early experiences can influence children's bio-behavioral outcomes. This area of scientific study lies at the interface between different disciplines, such as developmental psychology, clinical psychology, neonatology, and neurobiology, and provides a fertile ground for a better understanding of those processes that may contribute to the emergence of individual variations in child neurodevelopment. Early environmental experiences (i.e., the quality of the early parent-child relationship, preterm birth, and childhood maltreatment) can affect children's social behavior and emotional regulation through biological mechanisms. Moreover, recent evidence suggests that these early life experiences may, at least partially, alter gene expression through epigenetic modifications with long-lasting effects on neurodevelopmental trajectories. Starting from these premises, the symposium proposes to discuss how behavioral and biological markers can provide new insights into the impact of early life experiences on socio-emotional development during childhood. Possible biomarkers of early life stress as well as of early protective experiences in at-risk children will be also discussed.

## THE EFFECT OF EARLY VOCAL CONTACT ON PRETERM INFANTS AND MOTHERS DURING PAINFUL PROCEDURES IN THE NEONATAL INTENSIVE CARE UNIT: THE ROLE OF OXYTOCIN

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Preterm infants experience long periods of separation from their parents and are exposed to frequent painful clinical procedures, with short- and long-term effects on their neurological development and on the parental mental health. In the present study we aimed to evaluate the effects of Early Vocal Contact on pain expression in preterms and on maternal stress. Oxytocin (OXT) in newborns and mothers was investigated as a potential modulator of neonatal pain and parental stress. Twenty preterm infants were exposed to three conditions in a randomized order - the mother's direct voice (speaking or singing) and standard care - during a painful heel prick procedure. Salivary OXT was quantified in both infants and mothers. In infants, the Premature Infant Pain Profile was blindly coded by a trained psychologist and a nurse. During live maternal speech, pain scores decreased in the neonate, with an increase in OXT levels. The effect was marginally significant for singing. Mothers showed an increase in OXT and a decrease in stress levels. Endogenous OXT released during Early Vocal Contact in both mother and infant is a promising protective mechanism for preterms' pain, and the active involvement of parents during hospitalization may have positive effects on both, parents and newborns.



## SHORT-TERM AND LONG-TERM EPIGENETIC VARIATIONS IN VERY PRETERM INFANTS: EXPLORING THE CONTRIBUTION OF EARLY STRESS EXPOSURE IN NICU TO STRESS REGULATION PROGRAMMING IN INFANCY AND AT PRESCHOOL-AGE

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Very preterm infants (VPT) require hospitalization in the Neonatal Intensive Care Unit (NICU) where they are exposed to several pain-related stress, a major early adverse experience. The exposure to early adverse experiences associate with functional alterations of the DNA (e.g., DNA methylation). DNA methylation of stress-related genes (e.g., the serotonin transporter gene, SLC6A4) has been linked to adverse outcomes in children. Here we present findings of a longitudinal prospective study. SLC6A4 methylation was assessed at birth, at NICU discharge and at 4.5 years in VPT. At 3 months (corrected-age for VPT) emotional stress reactivity (Still-Face Paradigm) was assessed. At 4.5 years emotional distress in response to the Pre-schooler Regulation of Emotional Stress (PRES) was tested. The exposure to NICU pain-related stress associates with increased emotional distress at 4.5 years through SLC6A4 methylation. Also, higher stress reactivity at 3 months was associated with greater emotional distress at 4.5 years in VPT with higher SLC6A4 methylation at preschool-age. NICU-pain-related stress are embedded into socio-emotional development of VPT infants through epigenetic mechanisms and appears to be maintained in preschool age.

## THE IMPACT OF CAREGIVER'S HISTORY OF CHILDHOOD MALTREATMENT AND OF PROTECTIVE SERVICES PLACEMENT ON NR3C1 DNA METHYLATION IN CHILDREN WITH A HISTORY OF MALTREATMENT

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Child maltreatment is associated with altered methylation pattern in the NR3C1 gene involved in stress regulation. Greater risk factors in the family (caregiver's history of childhood maltreatment) are associated with negative developmental outcomes. However, the removal from the family and the placement in residential care services may be a protective factor. We aimed to investigate, in a sample of children exposed to deprivation or maltreatment, the contribution of caregivers' history of childhood maltreatment and placement in residential care to epigenetic alteration of NR3C1. The sample consisted of 33 children victims of maltreatment recruited at the IRCCS 'E. Medea' in Ostuni. An ad-hoc data collection checklist was used for detecting caregivers' characteristics. For epigenetic analysis, a saliva sample was taken using a non-invasive technique. Having a caregiver with a history of child maltreatment was associated with altered DNA methylation only in those children who had been placed in residential care for less than 2 years. High-risk family environment can become biologically embedded through epigenetic changes. These epigenetics vestiges can be reverse when children are removed from a high-risk context.

## EYE-C: NOVEL AI-BASED SOLUTION FOR COMPUTATIONAL ANALYTICS OF EARLY SOCIAL BEHAVIOR IN ATYPICAL NEURODEVELOPMENT

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Investigating early behaviors is proving challenging within atypical neurodevelopment, particularly Autism Spectrum Disorders (ASD). Early markers often emerge subtly and developmental trajectories are complex to predict. Implementing AI-based systems in clinical practice represents a solution that can help clinicians by providing more systematic methods to monitor child behaviors. The main advantage over more traditional approaches is to offer quantitative and refined analysis that can also be ecological. For this purpose, we designed EYE-C, a Behavior Imaging system based on cutting-edge AI models for robust fine-grained analysis of eye-contact in unconstrained therapist-child interactions. The framework was further validated through multiple applicative studies in the clinical setting for personalized early intervention. Extracted features were first analyzed for spectrum stratification to categorize the heterogeneity across early manifestations of the autistic phenotype. Next, we tested our metrics within early intervention as predictors for the treatment outcomes. These studies contribute to proving the feasibility of computational systems to address the challenges in designing personalized early intervention programs and predicting atypical developmental trajectories.

## FOLLOW UP PATHS FROM NEONATOLOGY TO PEDIATRIC EMERGENCY ROOM

*Proponente: Concetta Polizzi (Università degli Studi di Palermo - Società Italiana di Psicologia Pediatrica)*

This Symposium, promoted by the Task Force on Pediatric Psychology, focuses on the psychological and neurodevelopmental follow-up paths in the conditions of infants and children / adolescents with a developmental fragility oriented by prematurity, or pathology. This is a topic of transversal interest to the area of Developmental Psychology and Clinical Psychology, involved in this interdisciplinary symposium, since the follow-up calls into question the promotion of personal health. It constitutes the privileged path to monitor in the short and long term the possible effects of psychological illness, of dysfunctionality of development processes, in order to: intercept early the red flags of such fragility and intervene as soon as possible to reduce the evolutionary risk and promote instead strengthening of the person and/or of caregivers of reference. In this sense, therefore, the symposium presents different follow-up paths starting from the neonatal area, through two contributions that underline the importance of the neurodevelopmental follow-up with preterm births, not only severe but also late preterm, and again through two contributions that focus the follow up in pediatric chronic conditions (rheumatic diseases) and in pediatric emergencies (pediatric emergency room).

## LATE PRETERM: INTERNALIZING AND EXTERNALIZING DIFFICULTIES IN SCHOOL AGE

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Follow up programs represent a well-recognized tool for monitoring the emotional and behavioral problems in preterm children; nevertheless, they often focus on high-risk prematurity (very preterm-VP, <32 gestational weeks), while less attention is dedicated to late preterm-LP (34-36 gestational weeks), especially in case of long term assessment. The study aims to compare, at school age, maternal and paternal perceptions of internalizing and externalizing problems in groups of VP and LP children. Family pediatricians recruited 202 parents (101 mothers; 101 fathers) of 101 preterm children (33 VP, 68 LP) of school age, born at Bufalini Hospital in Cesena, asking them to complete CBCL 6/18. Analysis showed that LP children were perceived as more withdrawn than VPs ( $F(1,198)=4,745$ ;  $p=0,03$ ). Moreover, compared to fathers, mothers indicated higher levels of somatic complaints ( $F(1,198)=4,036$ ;  $p=0,05$ ), attention ( $F(1,198)=4,822$ ;  $p=0,03$ ) and aggressive behavior ( $F(1,198)=4,257$ ;  $p=0,04$ ). The VP fathers showed lower scores at Other Problems subscale than the VP mothers and LP fathers ( $F(1,198)=5,607$ ;  $p=0,02$ ). Despite preliminary, the results underline the importance of monitoring the internalizing and externalizing difficulties of LP children, considering the evaluations of both parents.

## WHAT DOES THE FOLLOW-UP OF PRETERM INFANTS TELL US?

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Preterm birth is a risk factor for long-term child development and is associated with deficits in several areas. The aim of this work is to evaluate the role of extremely low gestational age and birth weight as predictors of children's difficulties in language, cognitive and socioemotional domains in the early years and in pre-school. 553 preterm infants (267 males, 286 females; GA=28.46±2.08; BW= 1284,30 ± 504,395) were recruited at Vittore Buzzi Hospital between 2009-2021. At 1, 2 and 3 years of age, the Bayley-III Scales were used to assess children's cognitive, language and socioemotional development. At age 5, WPPSI-III was used to assess cognitive domains and CBCL/1.5-5 for social-emotional development. Regression analyses showed how children's receptive language (Bayley-III) was predicted by GA at 1 year of age ( $\beta = 0.236$ ;  $p = 0.019$ ;  $R^2 = 0.051$ ). At 5 years of age, children's internalizing ( $\beta = -0.467$ ;  $p = 0.023$ ;  $R^2 = 0.074$ ) and externalizing behaviors ( $\beta = -0.466$ ;  $p = 0.024$ ;  $R^2 = 0.073$ ) (CBCL/1.5-5) were predicted by GA while their processing speed (WPPSI-III) was predicted by birth weight ( $\beta = 0.368$ ;  $p = 0.020$ ;  $R^2 = 0.049$ ). Despite limitations (high dropout rate, lack of control group) these results highlight the importance of long-term follow-up of this population to prevent maladaptation.

## HEALTH-RELATED QUALITY OF LIFE IN CHILDREN AND ADOLESCENT WITH RHEUMATIC DISEASES: PRELIMINARY DATA FROM OUTPATIENT FOLLOW-UP CONSULTATIONS

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Rheumatic and Musculoskeletal chronic disorders exert a relevant impact on children and adolescents' body functions, activities, and on social participation. This study aims to evaluate trajectories of health-related quality of life (HRQOL) in this population, in response to a systematic follow-up psychological consultation offered in an outpatient setting. Data from 157 children and adolescents (range 2-18yrs, 99 F, 58 M) were collected at the Hospital of Bolzano. At each outpatient follow-up appointment (approximately every 6 months) PedsQL 4.0 was administered to children and their parents. Significant gender differences of mother's proxy reports in HRQOL were found only in the school age group (6-11yrs) for the Physical and Social Functioning scales of the PedsQL 4.0; a significant negative correlation was found between patients' age and their School Functioning ( $r = -.20$ ,  $p = .01$ ). HRQOL of patients improved significantly over time, (ANOVA for the Psychosocial Health Summary Score ( $F = 5.097$ ,  $p = .008$ ); Emotional Scale ( $F = 3.914$ ,  $p = .03$ )). Parents and adolescents reported an improvement in health-related quality of life (HRQOL) along intervention, suggesting the utility of the psychological follow up adopted for this still under investigated population.

## A PATH OF PSYCHOLOGICAL FOLLOW UP POST DISCHARGE IN THE PEDIATRIC AREA

*Concetta Polizzi (Università degli Studi di Palermo - Società Italiana di Psicologia Pediatrica), Giovanna Perricone (Università degli Studi di Palermo - Società Italiana di Psicologia Pediatrica), Antonio Carollo (Società Italiana di Psicologia Pediatrica - Azienda Sanitaria Provinciale di Palermo)*

The psychological follow-up paths activated in the post-discharge with children suffering from chronic diseases or in emergency condition, represent a privileged way to monitor and to support the evolutionary trajectory, reducing the risk of subsequent improper access to hospital and local services. The aim of the study is to explore the relationships between reasons for sending to follow-up and the needs of children and between resources and developmental problems; and again, to explore the relationship between the types of intervention used and the effects of change detected. A take-over and intervention form was used, applied by the psychologist in reference to 60 children (10.4 years, SD = 3.8). The analysis of variance highlighted the presence of emotional fragility as a fundamental motivation for the follow-up ( $\chi^2 = 53.4$ ,  $p = .001$ ); the correlational analysis showed: an association between this motivation and the need for support for the developmental trajectory ( $r_s = .78$ ,  $p = .001$ ), and a correlation between an educational rehabilitation and the changes in relationship management ( $r_s = .280$ ,  $p = .035$ ). The post-discharge follow-up makes it possible to intercept the psychological suffering conditions of the child often hidden by the symptoms that lead to hospitalization.



# NEW WINE IN OLD BOTTLES: DEBATING NEW CHALLENGES AND OPPORTUNITIES FOR PSYCHOLOGICAL STRESS RESEARCH IN AN INTERDISCIPLINARY ARENA

*Proponente: Giulia Buodo (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Many modern-day stressors present unprecedented challenges to stress response mechanisms that evolved to enable coping with potentially lethal threats. Such mechanisms may ultimately fail to serve their original function and instead result in ill-health. Also, although it is well-acknowledged that cognitive processes influence how an individual perceives and responds to both ordinary and extraordinary stressors, the impact of specific cognitive transdiagnostic variables on perceived distress needs further enquiry. Thus, stress research is called to broaden its scope to address new challenges, drawing on the contributions of clinical and experimental psychology. In the present Symposium, four contributors will discuss i) different aspects of the stress response in the context of an unprecedented global stressful event, i.e., the COVID-19 pandemic, and ii) the negative impact of specific cognitive processes on perceived distress. More specifically, two contributors will describe how pandemic-related stress has affected decision-making and has generated moral distress triggered by ethical conflicts. Two other contributors will describe how metacognitions and the ability to inhibit repetitive thought patterns, as cognitive transdiagnostic factors, can modulate subjective distress.

## ADAPTING TO RESTRICTIONS AND DEALING WITH CHANGE: THE PSYCHOLOGICAL IMPACT OF COVID-19 PANDEMIC

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The COVID-19 outbreak has challenged the ability to adapt to new life conditions in all people and all around the world. In dealing with these changes, individual differences in responses to stress have been exacerbated. In a first study, we tried to examine how the individual perception of stress level, due to the pandemic outbreak and to the following imposed lockdown, affected cognitive functions, such as decision making and impulsivity. The results showed that the perception of a higher stress level and a more vulnerable immune status biased decision making toward more risky/less advantageous choices in older male participants, and toward less risky/more advantageous choices in younger males. In a second study, we examined whether maintaining a good level of physical activity during pandemic, even during lockdown, was a protective factor against higher stress levels in older age. The results confirmed this hypothesis. Moreover, the study showed that, in the long term, also sedentary people adapted to the new life conditions. Overall, the results suggest that individual factors, such as age, sex, and physical activity, interact in impacting response to stress, and that this response might change over time.

## MORAL DISTRESS AND MORAL INJURY: INCREASINGLY RECOGNIZED CONDITIONS IN THE CURRENT ERA OF UNPRECEDENTED THREATS

*Michela Sarlo (Dipartimento di Scienze della Comunicazione, Studi Umanistici e Internazionali, Università di Urbino), Daniela Palomba (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

The current global multicrisis, in which a war broke out in the midst of an ongoing pandemic, has been threatening worldwide many aspects of people's daily life, raising attention on the long-term mental health outcomes of cumulative exposure to morally stressful events. While healthcare providers and frontline workers have undoubtedly faced the most challenging psychological and physical demands, many ordinary people have been exposed to ethical conflicts and moral constraints affecting decision-making, with potential consequences that may manifest as moral distress or even moral injury. The present work will offer an overview of these emerging issues by outlining the biopsychosocial constructs of moral distress and moral injury, the adverse impact of witnessing or committing moral violations on health and well-being, and the enduring power of moral emotions. Empirical original data on moral dilemmas in the young adult general population and in frontline workers during the COVID-19 pandemic will be presented and discussed to highlight the role played by empathic personal distress and negative emotions on moral decision-making.

## PSYCHOLOGICAL DISTRESS AMONG COLLEGE STUDENTS: THE MODERATING ROLE OF HEART RATE VARIABILITY IN THE RELATIONSHIP WITH MALADAPTIVE METACOGNITIONS

*Tania Moretta (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Giulia Buodo (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Psychological distress among college students is becoming a matter of significant clinical concern. Metacognitive beliefs and reduced resting heart rate variability (HRV), a psychophysiological index of self-regulatory capacities, are both associated with mental health problems. The present study aimed to test the relationship between maladaptive metacognitions (i.e., positive beliefs about worry; concerns about uncontrollability and danger; lack of cognitive confidence; beliefs about the need to control thoughts; cognitive self-consciousness) and psychological distress among college students, and the possible moderating effects of resting HRV. Forty participants completed self-reports of psychological distress and metacognitive beliefs. The electrocardiogram was recorded at rest for 5 minutes. Some maladaptive metacognitions, i.e., positive beliefs about worry and negative beliefs about thoughts, were positively associated with students' level of psychological distress. Of note, slope analysis revealed lower levels of maladaptive cognitive self-consciousness to be related to reduced distress only among those with higher resting HRV. Our findings suggest high resting HRV to be a potential protective factor from the development of distress symptoms among college students.

## ACUTE NEUROCHEMICAL EFFECTS OF INTRUSIVE THINKING IN PATHOLOGICAL AND NON-PATHOLOGICAL WORRIERS: A COMBINED IMAGING SPECTROSCOPY AND ECOLOGICAL STUDY

*Cristina Ottaviani (Sapienza Università di Roma), Martino Schettino (Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma), Chiara Parrillo (Ospedale Bambino Gesù), Simone Gazzellini (Ospedale Bambino Gesù), Federico Giove (Fondazione Santa Lucia IRCCS), Antonio Napolitano (Ospedale Bambino Gesù)*

Alterations in neurotransmission mediated by gamma-amino-butyric acid (GABA) and glutamate (Glx), the main inhibitory and excitatory neurotransmitters, play a pathophysiological role in stress-related disorders. Evidence, however, comes from comparisons between pathological and healthy samples at rest, making it difficult to understand the processes underlying this assumption. Magnetic resonance spectroscopy was used to investigate the effects of experimental induction of intrusive thinking (a transdiagnostic factor) on GABA and Glx in the Anterior Cingulate Cortex in pathological worriers and controls (n = 33; 15 males). While increases in GABA were elicited in both groups, indicating inhibitory effort to suppress intrusive thoughts, an opposite pattern emerged for Glx with increase in controls and decrease in worriers. Given that resting Glx is increased in stress-related disorders, results fit with a dimensional view of psychopathology, showing that intrusive thinking has the effect of making controls neurally like disordered individuals. Resting GABA and Glx predicted subjective responses to induction, i.e. levels of intrusiveness and repetitiveness. Ecological validity of the results has been supported by a momentary assessment of intrusive thinking on the same participants.

## PSYCHIC DEFENSES, IMMUNE DEFENSES, LEGITIMATE DEFENSES: DIFFICULT YEARS OF COVID AND WAR

*Proponente: Vittorio Lingiardi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

These are difficult years of COVID-19 and war. The coronavirus put a magnifying glass on both our frailties (lockdowns and feelings of loneliness, violent cohabitations, denial of contagion, vaccine hesitancy, epistemic distrust) and our resources (care, online therapies and relationships, virtuous cohabitations, epistemic trust). Over two years, the resilience of our immune and psychic defenses has been tested up to the most challenging: the individual and collective elaboration of mourning, the healing of wounds and post-traumatic scars. This panel will present the psychological impact of these two traumatic events: one natural (the coronavirus), the other by human hands (the war). Both unpredictable before they occurred. Clara Mucci will analyze the intergenerational transmission of trauma and how to increase resilience in Ukrainian populations. Santo Di Nuovo will reflect on trauma and the origins of violence from psychodynamic and neuroscience perspectives. Fabio Madeddu will show social support, emotion regulation, and coping as key factors for the psychosocial consequences of COVID-19. Vittorio Lingiardi will finally examine war as a paradox: it is both a human work and an inhuman horror; it has roots in human history while also being “unthinkable” to us.

## DISCOVER THE ORIGINS OF THE TRAUMA TO SET UP DEFENSES: FROM NATURAL STRESSORS TO HUMAN FACTORS

*Santo Di Nuovo (Dipartimento di Scienze della Formazione, Università di Catania)*

The world has gone through a pandemic and now a war - one of many wars that make human life tragic. Are these two traumatic events due to natural or social causes? The pandemic derives from a virus, therefore from a biological cause: but it is transmitted and widespread by social causes. The defenses are biological (e.g. vaccines) but also psychological (e.g. compliance with vaccination). The destructive violence that manifests itself in wars has, according to some theories, a 'natural' origin, i.e. biological: the "death drive" cited by Freud in the answer to Einstein's question "why war"; the "warrior gene" that triggers aggression, or other hereditary predispositions to intra-specific attack. But it also has social determinants: the "character drive" (Fromm), the educational aspects, the epigenetics, build personalities tending towards irrational violence. In this case the defensive responses should be psychodynamic and social. Reflections on the "naturalness" of evil lead to the promotion of research based on psychological theories and methods, which can develop appropriate defenses and resilience processes useful for overcoming stressors. The methods may derive from an integration between the psychodynamic-clinical and the neuroscientific approaches.

## WAR: A HEARTBREAKING WORD

*Vittorio Lingiardi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

In the space of a little over two years, the world has had to deal – on the front lines and on the back lines – with two different traumatic experiences: one so-called natural, and the other by human hands. (Although human responsibility for the pandemic and the environmental consequences of the war make the boundaries of these definitions uncertain.) In my contribution I will reflect on the psychological impact of these two different major events, both threatening our sense of security and undermining the concept of “average expectable environment”. The psychological complexity of the concept of “war” challenges us from a cognitive point of view: is it inevitably intertwined with human nature, “the father of all things”, as the philosopher Heraclitus argues? Is Kant right when he states that “the state of peace among men living side by side is not the status naturalis”? Is thinking about a world without wars a necessary utopia or a viable political project? The psychological challenge posed by the word war lies in the tension to which it forces us: holding together the purity of a pacifist heart and the awareness that human beings cannot give up war. For this reason, as the poet Ungaretti says, “the heart is the most torn country”.



## SOCIAL SUPPORT, EMOTION REGULATION AND COPING: KEYS FACTORS IN THE STUDY OF PSYCHOSOCIAL CONSEQUENCES OF COVID-19 PANDEMIC

*Fabio Madeddu (Università degli Studi di Milano-Bicocca)*

The COVID-19 pandemic is an unprecedented life-threatening event that is affecting the mental and physical health and well-being of the general population. The traumatic role of the COVID-19 pandemic is due to its direct and indirect threats to important life resources of the general population, such as safety, health, income, work, housing, and social support. Moreover, specific risk and protective factors for psychological distress have been identified. Moreover, some studies have found that individual differences have an impact on negative psychological consequences of COVID-19 pandemic, as in the case of perceived social support and emotion regulation strategies. Many studies highlight the buffering role of social support in alleviating, moderating, or eliminating negative consequences of stressful and adverse events. Detrimental effects of poor social support have been reported in healthcare workers during the COVID-19 pandemic. Along with social support, the impact of emotion regulation needs to be taken into account when examining negative psychological consequences of COVID-19 pandemic. Literature findings seem to underline one of the major covid's lesson: you cannot get out of crises alone.

## WAR TRAUMATIZATIONS IN UKRAINIAN POPULATIONS: POSSIBLE INTERGENERATIONAL TRANSMISSION AND HOW TO INCREASE RESILIENCE

*Clara Mucci (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Man-made traumata (from less severe, lack of caregiver-child attunement to more severe, with intentional interpersonal violence-abuse, rape, exposure to war and genocide) have the most severe consequences on the human psyche: they are attacks on the essential relational basis of our humanity (Cozolino, 2012; Mucci, 2013, 2018, Mucci & Scalabrini, 2021). Dissociation stems only as a vulnerability from disorganization of attachment and exposure to extremely stressful interpersonal events (Ferenczi, 1932; Liotti, 1992; Mucci, 2021). A dissociative structure is seen as the main component of severe psychopathology. Studies on second and third generations of survivors of massive traumatic experiences in the 20th century illustrate a long sequelae of intergenerational transmission from neurobiological consequences in the immune system response to personality splitting, cognitive distortions, various symptoms and memory disturbances, all enclosed in a dissociative structure. Attachment is the major vehicle of traumatic transmission, influencing resilience. Working on the loss experienced by the Ukrainian mothers refugees will have positive effects on the entire intergenerational cycle; we will investigate psychological, social and neurobiological factors towards trauma and resilience.

# PSYCHOLOGY FACING GLOBAL FUTURE CHALLENGES: ENVIRONMENT, JUSTICE, GENDER ROLE AND RELATIONSHIP DECONSTRUCTION

*Proponente: Caterina Arcidiacono (Università degli Studi di Napoli Federico II)*

Can we imagine psychology in the future society? Are there specific needs, competencies, power, and actions to pursue? Psychologists, on a formal level has found an undoubted recognition in the prevention, cure, and treatment of psychopathology thanks their caring competencies. Moreover, the role, function and tasks that psychologists may perform at social level are enhanced if we expand the concept of health to collective and environmental well-being. This symposium, therefore will discuss how psychology contributes to the construction of a better society and in particular when it is confronted by globalisation, which constantly brings both new challenges and new opportunities. How can psychology meet the challenge of the environment by making significant contributions to overcoming new earth problems? How and in what way can psychological interventions help in reducing inequality and promoting wellness and fairness? How does psychology acknowledge the challenges that the new social bonds are introducing in breaking the pillars of patriarchal society? The questions are not meant to be rhetorical nor formal. The challenge is to give voice to the potential of a profession that aspires to find recognition also beyond individual interactions and treatments.

## COMMUNITY PSYCHOLOGY APPROACH AS SOCIAL CATALYST OF CHANGES PURSUING FAIRNESS AND WELLNESS

*Caterina Arcidiacono (Università degli Studi di Napoli Federico II), Fabio Lucidi (Sapienza Università di Roma), Sergio Salvatore (Università del Salento)*

Community psychology approach has specific competencies useful to promote wellness and fairness at social level. Its methods bring the voice of individuals, especially if of neglected and disempowered areas, to be expressed promoting awareness and conscientization. In a critical approach, reflective procedure and awareness raising are the first step for social changes. Therefore, community psychology skills help in building social and community trust. Moreover, community psychology competencies are in dealing with group issues: helping group interaction, group research and group intervention: Participatory Community Based Participatory Research (CBPR) and interventions are rooted in its methods. School and organizational interventions by a community psychology approach acquire also methods and strategies to promote social interactions and create shared knowledge. The constant and permanent listening attitude to new needs and problems that the discipline pursues give to the psychologists the power to understand social changes and needs and therefore developing measures to support the development of new resources, especially related to new environmental needs and to the lost of traditional vision of gender roles.

## PSYCHOLOGY: LEARNING SCIENCE AND DIGITAL TECHNOLOGIES

*Pierpaolo Limone (Università degli Studi di Foggia)*

Psychology in the impact with digital technologies develops new and unexpected resources and strengths. In our global future societies, where digital and technological competencies are widespread skills, educational psychology has new opportunities in the frame of learning science. In school, for example, it provides continuous feedback, and, through gamification elements, it may increase motivation. Digital media, will also improve academic success as a learning tool if properly used. Therefore, the digital teacher will be the subject of new research because of the unprecedented implications of its activity in the contemporary context. Educational research has shown that digital media enhance learning when they support basic processes such as active participation, connection to the real world, facilitation of teamwork, and frequent and recursive feedback. Therefore, within societies the media can play a fundamental role. Moreover, education acquires not only new cognitive supports but also relational, communication and emotional dimensions. It is a new challenge that will improve the education system and facilitate learning and teaching for everybody in all different relational contexts.

## NEW APPROACHES TO HEALTH PSYCHOLOGY

*Fabio Lucidi (Sapienza Università di Roma)*

Many years after the proposal of a biopsychosocial model, today we speak of global health as a fundamental human right, in which health and disease are considered results of processes that are not only biological but also economic, social, political, cultural and environmental, transcending and going beyond national perspectives, as well as the interests and possibilities of individual disciplines. Adopting a transdisciplinary perspective from a transnational perspective, to speak of Global Health is to foreground the inequalities that are present in terms of hope and quality of life, disease and disability as well as health resources and opportunities both within and between countries, through research, training and intervention in care, disease prevention and health promotion. Health Psychology has the opportunity to contribute to this process by bringing to it knowledge, skills, perspectives ready to merge in an approach that focuses on problem solving and not on the disciplines that contribute to it.

## MEANING AND POSSIBLE FUTURES. THE SEMIOPOIETIC FUNCTION OF THE PSYCHOLOGY

*Sergio Salvatore (Sapienza Università di Roma)*

I will provide arguments supporting the view of the psychology as strategic resource for individuals, groups, communities, institutions, and societies, supporting their efforts to making sense of the radical uncertainty of current times. My thesis consists of the following four tenets. A) The future is not given anymore - climate changes, war, outbreaks tell us that radical changes have to be designed and built to make a future possible. B) The design of the future requires the valorization of many kinds of resources (technologies, institutions, social capital); yet in the final analysis it depends on the individuals' and collective capability of thinking of the present - i.e., to recognize its inherent systemic and temporal dimensions. C) I will provide a model of this capability in terms of "semiotic capital" - i.e., the symbolic resources (e.g., cultural meanings, discursive practices, values, attitudes) fostering humanizing forms of societal progress. In that the idea that the future is a psychological fact lies. D) Psychological science has been developing interpretative frameworks and methods to promote a new stage of accumulation of semiotic capital. Some examples of these frameworks and methods will be briefly outlined.

## PSYCHOLOGY FOR SPORT: DEVELOPING SPORT ENVIRONMENTS THAT PROMOTE PSYCHOLOGICAL WELL-BEING

*Proponenti: Alessia Cadamuro (Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università degli Studi di Modena e Reggio Emilia), Francesca Vitali (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona)*

Many studies underscore the importance of sport in achieving psychological and social well-being, also during development. To promote well-being through sport, however, it is necessary to move the focus from the sole performance to the psychological variables involved at an amateur and an elite level. This 4-contributions symposium explores how to promote well-being through sport. Moving from the youth to the elite context, the first study investigates the predictive role of coach-, family-, and teammates-created motivational climate on youth archers' goal orientation, enjoyment, well-being, and desire to continue sport. The second contribution investigates the relationship between perceived physical ability, self-objectification, body shame, and self-esteem in adolescent female athletes. The third study, again focused on female athletes, aims to explain which coping strategies elite rugby and football players use to maintain well-being during their pre-menstrual period. The last research explores the relaxing effect of a virtual reality-based natural landscape on perceived stress among adolescent and young adult athletes. Overall, these studies underline the relevant role of psychology in designing healthy sport environments.



## OF COACHES AND MOTHERS: THE ROLE OF MOTIVATIONAL CLIMATE IN DETERMINING ENJOYMENT, WELL-BEING, AND DESIRE TO CONTINUE SPORT OF YOUTH ARCHERS

*Elisa Bisagno (Dipartimento di Giurisprudenza, Università degli Studi di Modena e Reggio Emilia), Alessia Cadamuro (Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università degli Studi di Modena e Reggio Emilia)*

In youth sport, there is a well-documented relationship between motivational climate (mastery/performance) and individual goal orientation (task/ego) of youth athletes (Duda, et al., 2014). A mastery climate favors task orientation and enjoyment (MacDonald et al., 2011) and prevents burnout (Vitali et al., 2015). Less is known about the interplay between multiple motivational climates. We investigated the predictive role of coach-created, mother-created, father-created, and teammates-created climate on the athlete's goal orientation, enjoyment, well-being, and desire to continue sport in 96 (46 females) archers aged 11 to 21. Bias measures of motivational climate (mastery - performance) and goal orientation (task - ego) were computed. The athletes' orientation bias correlated with mothers' bias, fathers' bias, and teammates' bias (correlations .25 to .27,  $p < .01$ ). The main predictors of archers' enjoyment ( $R^2 = .13$ ) were mothers' ( $\beta = .35$ ,  $p < .01$ ) and coaches' bias ( $\beta = .21$ ,  $p < .05$ ); the only predictor of well-being ( $R^2 = .05$ ) was coaches' bias ( $\beta = .19$ ,  $p < .10$ ). The desire to continue sport ( $R^2 = .21$ ) was predicted by enjoyment ( $\beta = .46$ ,  $p < .001$ ). These results underline the importance of motivational climate in supporting sport enjoyment and well-being of youth athletes.

## SPORT MAKES ME FEEL GOOD: ASSOCIATIONS BETWEEN PHYSICAL ABILITY, SELF-ESTEEM, SELF-OBJECTIFICATION, AND BODY SHAME IN ADOLESCENT PLAYERS

*Chiara Pecini (Università di Genova), Daniela Ruzzante (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Gian Antonio Di Bernardo (Dipartimento di Educazione e Scienze Umane, Università degli Studi di Modena e Reggio Emilia)*

Self-objectification leads women to view their bodies as objects to be evaluated by others and it is linked to several adverse outcomes, including body shame. Although a great amount of literature has focused on antecedents of self-objectification, scant research has investigated factors that may prevent this process. In our study, we tested whether physical ability would be associated with decreased self-objectification and body shame via enhanced self-esteem. Indeed, research demonstrated that physical ability could benefit psychologically and physically. However, how physical ability limits self-objectification remains unclear. 121 female adolescent players from different sports participated in the research. Results displayed that physical ability was related to increased self-esteem and diminished self-objectification and body shame. Furthermore, regression analyses revealed that the link between physical ability and body shame was serially mediated by self-esteem and self-objectification. Recognizing adolescence as a crucial period of life for the development of body image issues, our results suggest the importance of physical ability in favoring girls' well-being and positive body image attitudes. Practical and theoretical implications will be discussed.

## HOW ELITE FEMALE RUGBY AND FOOTBALL PLAYERS COPE WITH PRE-MENSTRUAL PHYSICAL AND AFFECTIVE SYMPTOMS TO MAINTAIN WELL-BEING

*Francesca Vitali (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Simone Carazzato (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Federico Schena (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Roberto Modena (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona)*

While women's participation in sport typically associated with men (e.g., rugby, football) (Kunz, 2007) has grown, female athletes' challenges and needs are still poorly studied. One example is how female athletes cope with pre-menstrual (PM) physical and psychological symptoms (Findlay et al., 2020). Our study aimed to explain which coping strategies elite female rugby and football players use during their PM period to maintain well-being. A total of 263 elite female athletes (105 rugby players; Mage =  $23.55 \pm 5.40$  years) filled an online survey focused on coping strategies, physical and affective symptoms as well as cognitive resources, perceived physical ability (PPA), and well-being during their PM period. A dysfunctional impact (indirect) of the avoiding harm and the adjusting energy strategy (both direct and indirect) coping strategies, as well as a functional indirect influence of acceptance, self-care, and communication coping strategies were found on PPA and well-being during the PM period. Physical and affective symptoms, as mediators, reduced PPA and well-being, while cognitive resources endorsed them. These results underline the role of coping strategies and can inform practitioners on how to support elite female athletes in the pursuit of well-being and performance.

## RELAXATION EFFECT OF THE NATURAL LANDSCAPE THROUGH VIRTUAL REALITY (VR) ON PERCEIVED STRESS WITHIN THE SPORT CONTEXT: A COMPARISON BETWEEN ADOLESCENTS AND YOUNG ADULTS

*Ambra Gentile (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Salvatore Ficarra (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Anna Nordström (Department of Public Health and Clinical Medicine, Environmental Medicine, Umeå University, Sweden), Peter Nordström (Department of Community Medicine and Rehabilitation, Geriatric Medicine, Umeå University, Sweden), Antonino Bianco (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Marianna Alesi (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo)*

Several studies highlighted the potential of delivering nature through virtual reality (VR) to adults, while no evidence was found concerning children and adolescents. This study compared the relaxation effects of adult and adolescent athletes. Fifteen adolescent (mean age:  $13 \pm 0.92$  years) and 15 young adult athletes (mean age:  $24 \pm 3.82$  years) participated in the experiment. Participants had stress-induced via the Math Trier Stress Test, followed by 8 minutes in a VR winter forest environment. Stress levels were measured with the Perceived Stress Scale and the POMS-SF, at the beginning and the end of the procedure. The item "How much stress do you feel at the moment?" was also measured after the stressor. A three-way ANOVA on the stress item revealed a main effect of time ( $F_{2,56} = 61.47$ ,  $p < 0.001$ ) but no effect of the age group ( $F_{2,56} = 2.07$ ,  $p = ns$ ). A repeated measure ANOVA on the positive affect did not show any effect for time nor for the age group, while for negative affect, a significant effect of time ( $F_{1,28} = 7.23$ ,  $p = 0.01$ ) but not of the age group ( $F_{1,28} = 1.29$ ,  $p = 0.26$ ) was found. These results indicate that nature through VR reduces stress and negative affects similarly for adolescent and adult athletes.

# SPORT PSYCHOLOGY: PERFORMANCE AND QUALITY OF LIFE FROM TRADITIONAL TO NEW FORMS OF SPORT

*Proponenti: Monica Molino (Dipartimento di Psicologia, Università degli Studi di Torino), Claudio G. Cortese (Dipartimento di Psicologia, Università degli Studi di Torino)*

Sport psychology has attracted growing attention in recent years. While there is ample evidence in the literature regarding the antecedents of performance in traditional sports, researchers should turn their attention to innovative and latest forms of sport, such as e-sports or sports in the workplace, and examine more closely the effects of various types of sport on well-being and quality of life. The four studies presented in this symposium introduce these topics to enrich and renew the role of the discipline. The first contribution investigates the relationships between physical activity and psychophysical well-being among university employees in the post-pandemic period. In the second study, psychological benefits of practicing yoga and tai chi in the workplace are presented. The third contribution proposes a questionnaire to measure psychological dimensions of e-players involved in e-gaming. Finally, the fourth contribution presents the results of a study examining the role of both an aesthetically pleasing task (i.e., listening to music) and anxiety in influencing performance, specifically action anticipation in soccer penalty kicks. The discussion that emerges from these findings will help define opportunities, open questions, and future challenges for sport psychology.

## PHYSICAL ACTIVITY AND CREATIVITY TO ENHANCE WELL-BEING: A STUDY AMONG UNIVERSITY EMPLOYEES IN THE POST-PANDEMIC PERIOD

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Promoting physical activity in the workplace impacts physical and psychological well-being at the individual and organizational levels. Pre-pandemic studies have shown that university employees spend more time in sedentary jobs with little physical activity. Restrictions due to the Covid 19 pandemic have impacted well-being by further limiting physical activity. The aim of this study was to test the role of mediators of physical well-being and creativity in the relationship between physical activity and psychological well-being. A total of 755 adults (69% female, mean age = 49 years old) participated, 46% of whom were in academic and 54% in administrative positions. We used the Creative Personality Scale, the WHOQOL-Brief, and the IPAQ. Results of serial mediation conducted with SPSS28 showed an association between moderate pre-pandemic moderate physical activity and psychological well-being. This association was fully mediated by higher levels of physical well-being and creative personality. These results suggest the importance of activating synergistic prevention strategies between physical activity and psychological components to promote the wellbeing of university employees in the post-pandemic period, with particular attention to the female gender.

## PSYCHOLOGICAL BENEFITS OF WORKPLACE YOGA AND TAI CHI CLASSES AMONG EMPLOYEES OF THE UNIVERSITY OF PADOVA

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Sedentary behaviors among office workers have increased significantly in the last decades (Church et al., 2011). Yet, a substantial body of research has shown that physical inactivity constitutes a risk factor for anxiety symptoms (Teychenne et al., 2020). In the present work, we aimed to evaluate whether yoga and tai chi programs (10 hours each) contributed to improving psychological wellbeing in a sample of 223 female employees of the University of Padova. Before and after each program, participants completed self-report questionnaires assessing physical and mental health (SF-12), general distress (DASS), somatic anxiety (BAI), worry (PSWQ), cooperative behaviors (SCB), and assertiveness (SIB-R). State anxiety was also assessed at the beginning and the end of the second and second-to-last lessons of each program. Results showed a significant decrease in the levels of worry ( $p = .017$ ) and somatic anxiety ( $p = .018$ ) at the end of both yoga and tai chi programs. Even 1-hour yoga and tai chi was found to be effective in reducing state anxiety both in the second and second-to-last lessons ( $ps < .001$ ). Overall, these findings support the role of physical activity in decreasing anxiety levels and endorse the importance of introducing physical exercise programs in the workplace.

## PSYCHOLOGY FOR ESPORTS: DEVELOPMENT OF THE “E-SFERA QUESTIONNAIRE” TO DETECT PLAYERS’ MENTAL DIMENSIONS AND IMPROVE PERFORMANCE IN ESPORTS COMPETITIONS

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In recent years, esports had a high impact both in the economic field and in Sport Psychology (Newzoo, 2021). Increasingly recognized as a “sport” in its own right, it is interesting to investigate the mental dimensions that improve an athlete’s (i.e. “esporter”) performance and wellbeing. The SFERA model (recognized by CONI) is a tool used to optimize mental performance, consisting of five elements: Synchrony, Strengths, Energy, Rhythm, Activation. This study wants to provide first analyses about the validity of the “e- SFERA questionnaire”. We expect this tool to be useful in detecting the five dimensions of the model, analyzing convergent and divergent validity with other constructs used more frequently in psychology. A sample of gamers (both casual and professional) has been involved. Descriptive, EFA, CFA, convergent and divergent validity and reliability (Cronbach’s  $\alpha$ ) analyses will be carried out. Data collection is nearing completion, results will be ready by the date of the congress. Limitation are the cross-sectional nature of the online research and sample size. Sport psychologists could use this tool as a support for coaching sessions to improve professional players’ mental processes and optimize their performance.



## EFFECTS OF AESTHETIC APPRECIATION AND ANXIETY ON ACTION ANTICIPATION IN SOCCER PENALTY KICKS

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Previous evidence demonstrates that short expositions to aesthetically pleasing stimuli (such as music) are able to improve learning mechanisms and, more specifically, our ability to make predictions about the incoming sensory events. Here, we aimed to investigate the effect of an aesthetically pleasing task (i.e., music listening) on action anticipation efficiency in soccer. To this end, the ability to predict the fate of penalty kicks was measured using an experimental task in which participants observed a series of video-taped penalty kicks, with frontal-view presentation, up to the instant at which the kickers' foot touched the ball. A group of expert soccer players were presented with three different conditions: (1) aesthetically pleasing musical piece, (2) anxiety-inducing, non-preferred musical pieces, and (3) white noise. Following each task, participants performed one block of the penalty kick anticipation task. Response accuracy (i.e., rate of correct direction predictions) and response times were recorded. We expected the aesthetic condition (1) to enhance action prediction accuracy, as compared to the white noise control (3) and to the anxiety-induction condition (2), which might induce a significant worsening of the performance. Preliminary data will be discussed.

# THE PRENATAL MOTHER-INFANT HEALTH: INTERDISCIPLINARY PERSPECTIVES ON ADAPTATION AND STRESS IN PREGNANCY

*Proponente: Chiara Sacchi (Università degli Studi di Padova)*

Prenatal health is molded by the complex bio-psychological processes occurring between the mother and the fetus. This panel discusses the multifaceted influences that characterize pregnancy and the postpartum period, describing interdisciplinary research perspectives in prenatal mother-infant health. The first two presentations depict the maternal and fetal experience of continuous adaptation to internal and external cues in pregnancy, highlighting the implications for both clinical and developmental outcomes. The 1st contribution describes maternal interoceptive sensibility in pregnancy as a timely indicator of risk for postpartum mental health. The 2nd contribution presents an intervention of fetal enriched sensory stimulation whose effects are investigated postpartum as supporting infant's key competencies. The last two contributions address the role of maternal prenatal stress, describing stress-related pathways for the influence of women's health on child development. The 3rd presentation portrays maternal mental health as a perinatal hub conveying prenatal stress into infant's regulation difficulties. The 4th contribution adds to this perspective by describing sex-dependent epigenetic mechanisms involved in the association between maternal stress and the child's development

## THE ROLE OF EXTERNAL AND INTERNAL BODY CHANGES IN THE PREDICTION OF POSTPARTUM DEPRESSIVE SYMPTOMS

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Depressive symptoms in pregnant women are common after childbirth. During pregnancy, women experience rapid and unique external and internal changes in their bodies over a relatively short period. Although women tend to adapt to the new body condition, when this adaptation does not occur, body image dissatisfaction (BID) and altered interoceptive sensibility could contribute to the onset of postpartum depression (PPD). While literature showed a relationship between BID and PDD, no studies investigate the role of interoceptive sensibility in the onset of PDD. In this longitudinal study, 134 pregnant women filled out questionnaires during the second trimester, third trimester, and six weeks after the delivery, including the Body Areas Satisfaction Scale, the Multidimensional Assessment of Interoceptive Awareness, and the Edinburgh Postnatal Depression Scale. BID increased in the postpartum compared to the pregnancy period, and interoceptive sensibility increased over pregnancy. Findings showed that the increase of BID through the peripartum and the levels of interoceptive sensibility in the early phase of pregnancy predicted depressive symptoms in the postpartum. These results may help the development of novel interventions to support women during pregnancy and prevent PPD.

## CROSS-MODAL EFFECTS OF MULTISENSORY PRENATAL STIMULATION ON NEWBORNS' VISUAL ATTENTION

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By 27-week gestation the brain undergoes extensive changes driven by external input, suggesting that learning occurs even before birth. Much of the sensory input that reaches the foetus has a rhythmic structure, and literature suggests that intrauterine rhythmic experience may contribute to the emergence of complex skills during postnatal life. Adult studies show that rhythm entrains attention enhancing information processing. Here, we hypothesised that exposure to rhythmic stimulation may boost attention from the earliest stages of neurodevelopment. To this end, we tested the short- and long-term effects of enriched multisensory rhythmic stimulation provided across the last trimester of gestation on visual spatial attention at birth and 2 months postpartum. Starting from 29-week gestation two groups of mothers follows a rhythmic or non-rhythmic stimulation protocol, and infants' visuo-spatial attention skills are tested at birth and 2 months using a disengagement task in which accuracy and latency of orienting toward a peripheral target are measured as a function of the rhythmic vs random temporal structure of a central cue. Data collection is in progress: we expect rhythm to constrain the efficiency of attentional orienting differently for infants in the two groups.

## PRENATAL STRESS AND MATERNAL MENTAL HEALTH IN ASSOCIATION WITH INFANT EMOTION REGULATION

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For the mother-infant perinatal health especially, the pandemic has dropped an environmental stressor inside a dynamic psychobiological system. We study the longitudinal associations between maternal prenatal COVID19 exposure, pandemic stress, mental health symptoms and infants' emotion regulation. A sample of 643 Italian pregnant women completed a web-based survey in April 2020 and a follow-up at 6 months after delivery. Maternal assessment covered prenatal and postnatal measures for: COVID19 exposure, pandemic stress, mental-health symptoms (i.e., depression, anxiety, PTSD) and postpartum report of infants' negative affect. Pandemic stress during pregnancy predicted maternal mental health symptoms in postpartum. Maternal mental health symptoms during pregnancy, at the peak of pandemic, and maternal COVID19 exposure during postpartum are associated with infant negative affect, with postpartum mental health mediating these associations. The study puts the spotlight on perinatal mental health risk in women experiencing lockdown in pregnancy, especially when feeling high pandemic stress or when directly exposed to COVID19 postpartum. The study supports the association between pandemic-related maternal health across pregnancy and postpartum and child's developmental outcomes.

## SEX-DEPENDENT EPIGENETIC MECHANISMS IN THE ASSOCIATION BETWEEN MATERNAL ANTENATAL ANXIETY AND INFANT TEMPERAMENT

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Maternal antenatal stress is an emerging risk factor for child emotional development. Both sex and DNA methylation of stress-related genes may contribute to the embedding of maternal stress into emotional outcomes. Here, we investigated sex-dependent patterns in the association between antenatal stress, methylation of the brain-derived neurotrophic factor (BDNF) gene and infant Negative Emotionality (NE). Mother-infant dyads (N=276) were recruited at delivery. Maternal trait anxiety, as a marker of antenatal chronic stress exposure, was assessed retrospectively using the STAI-Y. Infants' BDNF methylation was assessed in 11 CpG sites in buccal cells. Infants' NE was assessed at 3 and 6 months using the IBQ-R. Higher maternal antenatal anxiety was associated with greater 6-month-olds' NE. Furthermore, maternal antenatal anxiety predicted greater infants' BDNF methylation in 5 CpG sites in males but not in females. Higher methylation at these sites was associated with higher NE at 6 months and greater 3-to-6-month NE increase, independently of infants' sex. Maternal antenatal anxiety emerged as a risk factor for infant's NE. BDNF methylation might mediate this effect in males. These results may inform the development of strategies to promote mothers and infants' emotional well-being

# THE PROFESSION OF SCHOOL TEACHER DURING THE PANDEMIC EXPERIENCE: DIFFICULTIES, CRITICAL ASPECTS AND RESOURCES

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The COVID-19 pandemic impacts on the school system, challenging the profession of teachers on the didactical, relational, and organizational levels. Petrocchi et al. focus on teachers' emotional exhaustion and coping skills, showing that the latter increases self-efficacy to work in an online environment, thus reducing technostress and emotional exhaustion. Ingusci et al. center on the increase of technostress in teachers, showing the protective role of personal resources such as resilience and job crafting, with relevant implications on the wellbeing of the organization. Lombardi et al. address the impact of the reorganization of learning environments on teachers' emotional experience, reporting an increase of negative emotions and a decrease of positive emotions, but also the functional role of new classroom management on positive emotions. Ivaldi and Testa focus on the understanding of communicative and emotional processes either among teachers and between teachers and parents, showing that the pandemic offers an opportunity to redefine communicative practices thanks to the discovery of new online small group experiences. The symposium opens reflections on the importance of supporting teachers' resources, to reduce the risk of burnout and to improve professional wellbeing.

## CAN PERSONAL RESOURCES AND JOB CRAFTING REDUCE TECHNOSTRESS? AN EMPIRICAL INVESTIGATION ON SCHOOL TEACHERS

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The COVID-19 pandemic created a context in the working world marked by radical change, uncertainty and stress. One of the most intensively studied constructs is technostress, i.e., stress caused by the excessive use of information and communication technologies (ICT) at work. The purpose of this study is to explore whether certain personal resources, such as resilience, and job crafting, may represent defensive factors against technostress, in the dimension of difficulty in managing the complexities caused by ICT. The analysis was carried out using the PLS-SEM on a sample of 252 teachers in a school context (average age 51.5 years, SD = 9.5, 83.7% women, 15.9% men, 0.4% other). The results showed that resilience plays a protective role against technostress. In turn, it increases crafting behaviour, which impacts on stress reduction. In practical terms, the findings show that acting on the demands and resources of the school context could be a useful personal-organisational substrate for promoting well-being and improving the quality of organisational life in schools.



## COMMUNICATION, PARTICIPATION AND LEARNING IN KINDERGARTEN CONTEXTS: THE CASE OF THE “FEDERAZIONE SCUOLE MATERNE DI TRENTO”

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The authors present an action-research realized inside the “Federazione scuole materne di Trento”. The research path involved four school circles with the aim of understanding and redefining communication processes and practices between teachers and parents. Specifically a total of 16 homogeneous focus groups and 6 heterogeneous focus groups were realized with the involvement of schools coordinators, teachers, parents and auxiliary staff. The research made it possible to bring out rich knowledge material relating to circulating representations, expectations and consolidated practices relating to the processes of communication and participation. The results revealed promising practices, critical issues and contradictions such as the importance of promoting dialogic and participatory communication processes within school places and spaces, the use of innovative tools that make it possible to manage renewed spatial and temporal boundaries, the relevance of integrated work to favor the communication of a not fragmented school work. Lastly, the research has made it possible to highlight how the COVID period has challenged and questioned some consolidated communication practices and new original methods.

## THE IMPACT OF TEACHING ENVIRONMENT ON TEACHERS' EMOTIONAL EXPERIENCE DURING THE COVID-19 PANDEMIC

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The Pandemic has required social distance measures and implementation of challenging learning environments. This work aims to explore teachers' emotional experience during the reorganization of learning environments. We present 2 studies conducted during the spring of 2020 and one year later. Participants were 228 teachers in 2020 and 71 in 2021 answered online questionnaires about psycho-emotional experience, classroom and teaching management. The main results reveal in 2020 difficulties with teaching organization, showing significant impacts on increasing negative emotions ( $R^2=.066$ ,  $p < .001$ ) and decreasing positive emotions ( $R^2= -.046$ ,  $p < .001$ ). To further investigate these relationships, in 2021, we explored more dimensions, showing that the experience of classroom management impacts on positive emotions ( $R^2=.103$ ,  $p=.007$ ), but not on negative emotions. Furthermore, results show mediation effect of school climate experience about the sense of belonging ( $r=.16$ ,  $p=.016$ ) and the experience both of students' relationship ( $r =.083$ ,  $p=.039$ ) and support ( $r=.084$ ,  $p=.033$ ). These findings highlight that the teaching environment had a significant impact on teachers' emotional experiences during this pandemic period and that relational dimension of the school environment may contribute to support positive emotions.

## EMOTIONAL EXHAUSTION AND COPING SKILLS AMONG TEACHERS DURING THE COVID-19 PANDEMIC: A SEQUENTIAL MEDIATION MODEL APPLIED ON ONLINE SELF-EFFICACY AND TECHNOSTRESS

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Teaching is a demanding and exhausting job (de Heus and Diekstra, 1999). Emotional Exhaustion (EE) is one of the main facets of burnout with an impact on teacher's motivation (Kunter et al., 2011) and teaching quality (Klusmann et al., 2008). Previous research established that stress and coping skills are two main determinants of EE, while the role of mediators is still under debate. The present research investigated online self-efficacy and technostress as mediators in the relationship between coping skills and EE, during COVID-19. Participants were 446 teachers (87% women, age range 22-68,  $M = 46.17$ ,  $SD = 10.41$ ; 46% Elementary school and 54% Junior High school; Myears of experience = 16;  $SD = 11.7$ ). The parallel mediation model found that the complete mediation between coping self-esteem technostress EE was significant as well as between coping self-esteem EE. The direct effect of coping was not significant. The model also included the effects of several covariates. Teacher's coping skills increase self-efficacy to work in an online environment. This results in less technostress and then less emotional exhaustion. The risk of burnout is then linked to the capability of the teachers to manage their teaching duties in a remote mode.

## TOWARDS A SUSTAINABLE CHANGING: THE ROLE OF PSYCHOLOGICAL FACETS

*Proponente: Patrizia Velotti (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Current challenges of new sustainable societies require us to adapt quickly and find solutions that may promote prosperity by protecting the earth. The connections between such challenges (i.e., climate change, inequality) and human behaviour literature inform the exploration of underlying mechanisms that may foster the active involvement of individuals and countries in environment protection practices. This symposium aims to address the broad field at the intersection between the environment and human behaviour, both at the individual and community level. In particular, The Catholic University of Sacred Heart explores motivations underlying the choice of using public transport. Sapienza University of Rome examines the complex interplay between emotional, relational, cognitive, and moral factors in pro-environmental behaviours. The University of Genoa explores the subjective perception of risk. Sapienza University of Rome examines the Psycho-cultural determinants of wildfires prevention.

## MOTIVATIONS UNDERLYING THE CHOICE OF USING PUBLIC TRANSPORT IN NON-URBAN CONTEXT: THE ROLE OF TRAVEL SATISFACTION

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The study was performed within the scope of the European Project SAMBA – Sustainable Mobility Behaviours in the Alpine Region (partnership with Province of Padova) with the general purpose to assess the experience related to the mobility of the people relying on a public hospital, located in non-urban context. The specific aim was to investigate the use of local public transport bus services (TPL) and the motivations underlying the use or non-use. The experience of TPL use and motivations was investigated in a sample of hospital's users taking into consideration different categories of users (visitors and patients, working employees, nursing students) and gender and age differences. An on-line questionnaire specifically designed for the purpose of the research was completed by a sample of 400 hospital's users, women (71%) and men, aged 18-82 (55% between 41 and 60 years old). The results showed that poor accessibility and poor hourly coverage were the main motivation to the non-use of the TPL, whereas sustainability resulted as the more satisfying characteristic of the TPL for users. Significant differences were found in motivation between different categories of hospital users, suggesting the opportunity to adopt different strategies to promote the TPL use.

## PERCEPTION OF NATURAL HAZARDS AND COMMUNITY RESILIENCE, A PRELIMINARY STUDY

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The resilience of a territory with respect to natural risks is based on its ability to tolerate perturbations and not to suffer their impacts in a traumatic way. Citizens' risk perception is important to ensure self-protection behaviour, in case of natural events such as floods or earthquakes. A change of attitude must be encouraged: from citizens as recipients of civil protection services to members of the resilience system of the territory. The present study investigated the relationship between the area of residence, the direct or vicarious experience of exposure to risk and the frequency of access to institutional information sources, with the perception of natural risks (floods, landslides, interface fires, heat waves, storm surges, tsunamis, earthquakes, strong wind, snow). The results of the questionnaire administered to the population of the municipality of Genoa (N: 1700) indicate an important role of direct or vicarious experience, and therefore also of the place of residence, with the perception of risks. Access to institutional information sources is still limited and shows an aspect on which to improve the relationship between citizens and institutions, to ensure greater awareness of the risks and ability to adopt appropriate self-protective behaviors.

## PSYCHO-CULTURAL DETERMINANTS OF WILDFIRES PREVENTION

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Wildfires adversely affect the ecosystem and cultural heritage. In order to address this phenomenon, it is essential to move from the paradigm of suppression to that of prevention. The current study is grounded on the Semiotic Cultural Psychology Theory (SCPT), which assumes that individual cognition is mediated by semiotic resources (e.g. beliefs, symbolism, images, values, behavioral scripts, rituals, worldviews) provided by the social group's cultural milieu. The SCPT claims that these semiotic resources are grounded on basic generalized affective meanings (symbolic universes). The study aims to contribute to wildfire prevention, focusing behaviours and attitudes of a sample of inhabitants. Participants completed a set of questionnaires addressing their way of feeling, thinking, and acting in relation to wildfire prevention practices. Gathered data were analysed through multidimensional analysis techniques to determine the influence of symbolic universes' cultural models on wildfire prevention behaviour. Findings are consistent with the hypothesis that cultural models play a relevant role in shaping attitudes towards wildfires phenomena. Despite the specificity of results the study contributes to explain wildfires phenomena offering cues to onset preventive intervention.

## THE COMPLEX INTERPLAY BETWEEN EMOTIONAL, RELATIONAL, COGNITIVE AND MORAL FACTORS IN PRO ENVIRONMENTAL BEHAVIORS

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Numerous studies have shown the current environmental crisis can be mitigated by a sustainable use of resources. International literature shows that studies have focused on 3 clusters of factors that can predict pro-environmental behaviors (PEB): 1) habitual behaviors, 2) motivational factors (cost/benefit assessment; emotional factors; moral concerns), 3) contextual factors. While some studies have focused on costs/benefits and/or psychosocial variables, further studies have highlighted the important role of emotional factors. Despite this, most studies have investigated these factors separately. The present study aimed to assess the complex interplay between emotional, relational, cognitive and moral factors and PEB. N=500 individuals filled out self-report questionnaires assessing their relationship with the environment (e.g, PEB, nature relatedness, place attachment), emotional factors (e.g, empathy, emotional regulation, compassion), cognitive factors (e.g., self-control, empathic and social self-efficacy, cognitive flexibility), and moral attentiveness. Results evidenced empathy and emotional regulation to be major predictors of PEB. These findings offer important considerations for the development of intervention programs that could foster pro-environment behaviors.



## WHY ARE FACES SO SPECIAL? HINDERING AND PROMOTING FACTORS AFFECTING FACE PERCEPTION ACROSS THE LIFE SPAN

*Proponente: Valentina Silvestri (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

As humans, our understanding of the social world is highly influenced by the rapid and automatic evaluation we make on others based on the social stimulus par excellence, the face. The face is the body district that conveys the largest amount of information relevant to social communication: identity, gender, age, ethnicity, but also mental states and the emotional status of others. Also, right at the onset of postnatal life, faces and face-like stimuli attract infants' attention and trigger a preferential attentional response that is rooted in our phylogeny, likely due to its adaptive value. This early sensitivity to the basic perceptual properties of the face is refined over the course of development as a result of the quantity and quality of facial experience in the social environment. The goal of the symposium is to discuss the factors that modulate, hinder or boost face perception in healthy and clinical populations -i.e., adult patients with posterior stroke- at different times in development, from birth to adulthood.

## NEWBORNS PERCEPTION OF DYNAMIC FACIAL EXPRESSIONS OF EMOTIONS: THE ROLE OF THE SELECTIVE REMOVAL OF SPATIAL FREQUENCIES

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The few existing studies that investigated newborns' ability to discriminate facial emotions show that newborns are able to discriminate at least between some emotional expressions. However, the visual mechanisms underlying emotion discrimination are still unclear. Indeed, it should be considered that emotions are discriminated based on basic perceptual information, such as global and local elements, mediated respectively by low- (LSF) and high- (HSF) spatial frequencies. Here, we present results from two studies using visual preference and habituation paradigm where we adopted the spatial frequency approach, in which HSF or LSF are selectively removed from the images, to investigate the necessary and sufficient visual information newborns use when discriminating emotional faces. Our findings suggest that newborns discriminate between happy and fearful faces with both HSF and LSF, but they prefer happy faces with only HSF. The visual information present in the image modulates the perceived salience of facial cues for emotions at birth, with low-SF contributing critically to the salience of threat-related cues. Results are discussed in light of their implications for the understanding of the perceptual and, indirectly, neural mechanisms involved in emotion perception.

## PRESCHOOLERS' PERCEPTION OF FACIAL EXPRESSIONS: THE ROLE OF AFFECTIVE TOUCH IN FACILITATING THE DISCRIMINATION OF EMOTIONS FROM FACES

*Letizia Della Longa (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Laura Carnevali (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Irene Valori (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Teresa Farroni (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

The ability to decode emotional signals from faces represents a crucial prerequisite for socio-affective development and the formation of social bounds, allowing children to understand others' feelings and intentions. This ability emerges early in life, but full proficiency in discriminating subtle emotion expressions gradually develops throughout childhood. The present study investigates the interplay between multiple sensory modalities to promote emotional processing in preschool children. We ask whether socio-emotional information carried through touch (affective touch) might facilitate the processing of emotional facial information. The results suggest that when children experienced affective touch (slow stroking) they were more accurate and fast in associating different face identities expressing the same emotion, compared to when they experienced non-affective touch (tapping). Interestingly, our findings point to an interaction between the type of touch and the valence of facial expressions, indicating that affective touch may differently modulate the processing of faces expressing positive vs negative emotions. This contribution will discuss possible implications of the complex integration of multisensory social information for the development of emotion perception.

## EXPLORING THE GENERALIZABILITY AND STABILITY OF THE HALO EFFECT BETWEEN FACES' AESTHETIC APPEARANCE AND STRANGERS' PERCEIVED TRUSTWORTHINESS

*Giulio Gabrieli (Istituto Italiano di Tecnologia), Gianluca Esposito (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

The Halo Effect is a well known phenomena for which a trait, such as the aesthetic appearance of a person, influences the perception of other non-directly estimable traits of an individual, such as the level of intelligence, competence, or trustworthiness. Despite the amount of research conducted on the effect with regard to the human face, the majority of the studies focused on adults' from WEIRD countries. In a series of three studies, we explored the generalizability of the Halo Effect between faces' Aesthetic Appearance and perceived Trustworthiness across faces of different age groups (children, adults, elders), ethnicity (Asian and Caucasian) and genders (male and female), and the stability and exploitability of the effect. Results suggest the generalizability of the Halo Effect across cultures and genders but not age groups, with children faces eliciting specific trustworthiness estimations.

## ARE FACES REALLY SPECIAL? EVIDENCE FROM PCA STROKE PATIENTS

*Silvia Gobbo (Università degli Studi di Milano-Bicocca), Ro Julia Robotham (Copenhagen University, Denmark), Randi Starrfelt (Copenhagen University, Denmark)*

A longstanding debate in the literature concerns whether deficits following an acquired brain lesion can be specific for faces or if face recognition is impaired together with an impairment in the recognition of other non-face objects. A way to investigate this is by considering patients with impaired ability to recognize faces due to an acquired brain lesion. However, the literature on the topic relies mainly on single cases, often recruited based on symptomatology rather than lesion localization, and lacks a systematic comparison between face recognition and within-category object recognition in patients. In the present work, 64 patients with a stroke in the areas supplied by the Posterior Cerebral Artery and 48 matched controls were tested with comparable tests of face and object recognition (the Cambridge Tests of Face Memory and House Memory, and a novel test designed to compare face and object recognition). Differently from the previous studies, patients were recruited based on the anatomy of the lesion and not on symptomatology. We ask whether there is a systematic relationship between patient performance with faces and objects across the various tasks and if any patients show selective deficits for faces. Results and possible implication of findings will be discussed.

## ADVERSE CHILDHOOD EXPERIENCES: ASSESSMENT METHODS AND IMPACT

*Proponente: Cecilia Serena Pace (Dipartimento di Scienze della Formazione, Università di Genova)*

Research considers that adverse childhood experiences (ACE) are central in shaping psychological functioning. However, some questions remain open: internationally shared ACE-oriented screening protocols are still lacking; empirical knowledge on prevalence and implications of ACEs in Italian population is missing; the nature of the processes taking into account the relationships between ACEs and adolescents' psychopathologies is still unclear. This panel presents, from an interdisciplinary perspective, four Italian studies providing some answers to these issues. The contribution from University of Modena and Reggio Emilia (Bloom et al.) discusses a protocol for screening of ACEs used by childcare professionals. The study from University of Genoa (Muzi et al.) reports preliminary data collected among 1000 adults, with the ACE-International Questionnaire released by the WHO. The study from the Universities of Palermo, Messina and Bari (Falgares et al.) examined how childhood maltreatment leads to borderline personality throughout attachment style, among 50 adolescent outpatients. The study from University of Turin (Longobardi and Fabris) explored the role of the ACEs -in terms of parental rejection- and early maladaptive schemas as risk factors for muscle dysmorphia in adolescents.

## IDENTIFYING CHILD MALTREATMENT IN THE 0-3 AGE GROUP: A SCREENING PROTOCOL FOR CHILDCARE PROFESSIONALS DEVELOPED WITHIN THE ECLIPS PROJECT

*Johanna Maria Catharina Blom (Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università degli Studi di Modena e Reggio Emilia), Erika Benassi (Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università degli Studi di Modena e Reggio Emilia)*

Recent reports on child maltreatment indicate that abuse and neglect are mostly referred by teachers of school-aged children, and in less than 1% by childcare professionals (CPs) caring for infants and toddlers. This constitutes a key problem because children younger than three years comprise almost 50% of all child victims (USDHHS, 2019; 2020). The European project ECLIPS aims to identify the needs related to the screening and referral of child maltreatment by CPs working with children aged 0-3 in daycare settings of four European countries (Belgium, Hungary, Italy, and Latvia) and to develop a protocol to timely identify and refer. A preliminary study on CPs' competencies and needs indicated significant gaps in both processes: tools and formal screening are hardly used, main barriers to referral are psychological (e.g., lack of self-efficacy and fear of making mistakes), and childcare professionals report profound lack of knowledge of screening and referral. To fill these gaps, a screening and referral protocol has been developed with and for CPs with the Living Labs method: it comprises a self-assessment tool for CPs, a three-layered screening tool and both referral and "Communication with parents" guidelines. The positioning and usefulness of the protocol will be discussed.

## THE ADVERSE CHILDHOOD EXPERIENCES-INTERNATIONAL QUESTIONNAIRE (ACE-IQ) IN ITALY: PRELIMINARY DATA ON ONE THOUSAND COMMUNITY ADULTS

*Stefania Muzi (Dipartimento di Scienze della Formazione, Università di Genova), Guyonne Rogier (Dipartimento di Scienze della Formazione, Università di Genova), Cecilia Serena Pace (Dipartimento di Scienze della Formazione, Università di Genova)*

In 2011 the World Health Organization (WHO) released the Adverse Childhood Experiences International Questionnaire (ACE-IQ), aiming to assess the occurrence of a wide range of potential adversities occurring within the household (i.e., neglect, maltreatment, abuse, household dysfunctions) or outside (i.e., bullying, community violence, or collective violence), encouraging worldwide translation and research on the ACE-IQ. This study aimed to report descriptive results of pilot employment of the Italian translation of the ACE-IQ, authorized by the WHO. The Italian ACE-IQ was administered to 1000 Ligurian communities (50% males) aged 18-90 years old ( $M = 42$ ,  $SD = 17.59$ ) in four groups of age (18-29, 30-45, 46-65, 65+). Overall, 97% of the sample experienced at least one ACE in their life ( $M = 4.57$ ,  $SD = 2.33$ ). Prevalence rates revealed emotional neglect (80%) and abuse (58%) as the most occurrent ACEs within the household, and community violence (53%) outside. Gender and age group predicted 15% more of total ACEs occurrence, and gender and age also show different independent or interactive predicting effects on specific ACEs. Detailed results are presented, highlighting implications for practitioners, e.g., a potential underestimation of ACEs in the community.



## EXAMINING THE MEDIATING ROLE OF ATTACHMENT STYLE IN THE RELATIONSHIP BETWEEN CHILDHOOD MALTREATMENT AND BORDERLINE PERSONALITY DISORDER IN ADOLESCENT OUTPATIENTS

*Giorgio Falgares (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Giulia Costanzo (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Giovanna Manna (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Francesca Giannone (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Carmela Mento (Dipartimento di scienze biomediche odontoiatriche e delle immagini morfologiche e funzionali, Università degli Studi di Messina - UOC Psichiatria, Azienda Ospedaliera Policlinico Universitario "G. Martino", Messina), Ivan Formica (Dipartimento di Scienze cognitive, psicologiche, pedagogiche e degli Studi culturali, Università degli Studi di Messina), Maria Rita Infurna (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Rosalinda Cassibba (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

Childhood maltreatment (CM) refers to a series of acts of commission and/or omission by a parent or other caregiver that may result in harm to the child, with possible detrimental effects on his/her psychological development. Particularly, the extant literature has identified CM as one of the most significant predictors of adolescent borderline personality disorder (BPD), defined as a serious mental disorder characterized by an intense and pervasive pattern of instability in interpersonal relationships and identity. However, the mechanisms through which CM might lead to later BPD are still under debate. For this reason, the aim of this study was to further explore the relationship between CM and BPD through the examination of the potential mediating role of adolescent attachment style in a clinical sample. We recruited 50 adolescent outpatients followed in a public psychiatric unit in the South of Italy, asking them to complete the following instruments: CTQ, ASQ, and BPI. Preliminary results seem to support the association between maltreatment experiences, insecure forms of attachment, and borderline personality pathology in adolescent outpatients. Further analyses will be performed in order to test the hypothesized mediating model.

## ADVERSE CHILDHOOD EXPERIENCES AND RISK OF MUSCLE DYSMORPHIA IN ADOLESCENTS: EXAMINING THE ROLES OF PARENTAL REJECTION AND EARLY MALADAPTIVE SCHEMAS

*Matteo Angelo Fabris (Università degli Studi di Torino)*

Muscle dysmorphia (MD) is a subtype of body dysmorphic disorder characterized by over-concern with one's muscles that are perceived as not being developed or lean enough. Considering the impact of MD on the psychophysical health of individuals, it is important to identify risk factors associated with the onset of the syndrome. However, theories regarding the development of MD are still lacking. In this direction, some evidence suggests that adverse childhood experiences (ACEs) and insecure attachment to parents may be risk factors for the onset of MD. In order to extend our knowledge of the relationship between ACEs and MD, we propose to test the possible association between parental rejection and MD in adolescents by investigating the possible mediating role of early maladaptive schemas. We recruited 573 male adolescents (14-20 years,  $M=16.72$ ;  $SD=1.66$ ) who completed an anonymous questionnaire containing the following instruments: Muscle Dysmorphic Disorder Inventory (MMDI); Parental Acceptance/Rejection Questionnaire (PARQ); Young Schema Questionnaire (YSQ-A). Preliminary results seem to indicate an association between parental rejection, maladaptive schemas, and the risk of muscle dysmorphia.

## AT THE ROOTS OF THE HUMAN MIND: NEW CHALLENGES FOR THE FUTURE OF INFANT STUDIES

*Proponenti: Eloisa Valenza (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Viola Macchi Cassia (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Lucia Regolin (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Research on neonatal and infant cognition has developed rapidly over the last 35 years. Italian researchers contributed greatly to the advancement of knowledge and played a prominent role in the field. The symposium presents the ultimate research questions, approaches and techniques enabling future advances in the understanding of infant cognition, highlighting the strength of an interdisciplinary perspective integrating developmental science, neuroscience, and comparative psychology. Contributions will present outstanding samples of recent researches investigating: (1) animal social cognition within a comparative and evolutionary framework, (2) yawning behaviour -a universal stereotyped respiratory reflex in vertebrates- across the prenatal, perinatal and postnatal age, (3) perception and understanding of touching gestures, as revealed through infant looking behavior, facial muscles activation, and brain responses, and (4) visual attention abilities involved in lexical comprehension measured through online studies. Implications of the four contributions for the future of infant studies will be discussed in a final section led by Francesca Simion, an Italian pioneer of newborn research.

## VISUALLY NAÏVE DOMESTIC CHICKS AS A MODEL TO STUDY INBORN RECOGNITION OF ANIMATE AGENTS

*Orsola Rosa-Salva (Centro Interdipartimentale Mente/Cervello, Università di Trento), Bastien S. Lemaire (Centro Interdipartimentale Mente/Cervello, Università di Trento), Mirko Zanon (Centro Interdipartimentale Mente/Cervello, Università di Trento), Mikolaj Hernik (UiT The Arctic University of Norway, Norway), Giorgio Vallortigara (Centro Interdipartimentale Mente/Cervello, Università di Trento)*

The early social responses of visually naïve domestic chicks have long been studied in a comparative perspective to those of human infants. Research with this animal model complements infant studies, revealing whether mechanisms known in babies are also present in naïve organisms. Indeed, chicks can be hatched in complete darkness and tested before any visual experience. Similar inborn predispositions to attend to visual features distinctive of animate agents are shared between newborn babies and visually naïve chicks. For instance, chicks' preferences are elicited by face-like patterns, self-propelled or semi-rigid biological motion, or by objects whose body axis is aligned to their trajectory (a feature typical of the motion of bilateria). Here we investigated the response of naïve chicks to more complex configurations, in which multiple agents appear to be engaged in "social interactions" (e.g., "chasing" stimuli or "wolf-pack" effect stimuli). Chicks discriminated chasing and non-chasing patterns, but their preferences were driven by the temporal unpredictability of the agents' motions. Moreover, chicks seemed to be able to perceive the "wolf-pack" effect, similarly to human observers (in which these stimuli elicit the perception of apparent stalking behaviour).

## INVESTIGATING YAWNING IN FETUSES, NEONATES AND INFANTS

*Damiano Menin (Dipartimento di Studi Umanistici, Università degli Studi di Ferrara), Marco Dondi (Dipartimento di Studi Umanistici, Università degli Studi di Ferrara)*

Yawning is a stereotyped phylogenetically and ontogenetically old behavioral pattern, ubiquitous to vertebrates, yet the complexity of its modulation mechanisms - involving, e.g., circadian rhythms, hunger, thermoregulation, pain, stress and social co-regulation of arousal - still eludes the interdisciplinary effort aimed at individuating its proximate and ultimate functions. During the last years, one particular theory that sees yawning as a mechanism to thermoregulate the brain has emerged for its capacity to explain a vast set of evidence related to yawning modulation, but alternative hypotheses keep being formulated and investigated by different research groups, including biologists, ethologists, neuroscientists, physicians and psychologists. In this context, human perinatal and infant research can play an important role in the perspective of distinguishing between ontogenetically primitive and derived modulatory mechanisms and investigating their developmental trajectories, yet research in this field is still limited. The talk presents three recent studies carried out at the Early Infancy Lab of the University of Ferrara in the effort of filling this gap, focusing on yawning in fetuses, preterm and full term neonates and infants.

## EXPLORING THE SENSE OF TOUCH IN INFANCY

*Margaret Addabbo (Università degli Studi di Milano-Bicocca), Chiara Turati (Università degli Studi di Milano-Bicocca)*

Touch is essential to connect infants' internal states to the external environment. The talk focuses on how touching gestures are processed in infancy using a multilevel approach, which includes behavioral assessments (e.g., looking times, eye-gaze), measures of brain activity (electroencephalogram, EEG) and facial muscles responses (surface electromyography, sEMG). Already at birth, newborns discriminate between bodily gestures involving or not a tactile component, and 3-month-olds manifest a visual preference for touching gestures. This early attunement toward social gestures involving touch might guide the development of the ability to share others' tactile experiences. At 8-months, EEG mu rhythm (an index of somatosensory activation) desynchronizes in response to both felt and observed touch in somatosensory locations. Also, 11-month-olds activate the zygomaticus major muscle, involved when we smile, during the observation of caresses but not scratches. Lastly, maternal tactile contact with the infant modulates infants' attentional biases toward emotional facial expressions, as shown through eye-tracking measures. Overall, our results underline the crucial role of observed and experienced touching gestures in shaping infants' emotional and cognitive development.

## MAPPING VISUAL ATTENTION DEPLOYMENT DURING LEXICAL COMPREHENSION IN INFANCY: THE LOOKING-WHILE-LISTENING PARADIGM

*Elisa Di Giorgio (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Giulia Calignano (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Sofia Russo (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Natalia Reoyo Serrano (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Marco Lunghi (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Silvia Benavides Varela (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Eloisa Valenza (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

For an efficient language learning, infant must link words with objects and/or events. This mapping process might be promoted by the refinement of attentional mechanisms during development. However, little is known about the intertwined developmental progression of the two processes. We present data on the importance of using complementary measures of early attention and lexical abilities as a preferential gate to a broad picture of infants' language development. We employed the Looking-While-Listening Paradigm (LWL) to investigate semantic interference during lexical comprehension in 9-to 36-month-old infants. They were presented with two visual stimuli and hear a label referring to one of them. By examining the infant's eye movements, it was possible to tap into the visual attention processes involved in lexical comprehension. Data collected both in presence and remotely at home showed that the semantic interference effect increases with age starting from 18 months. We will discuss the broad methodological and theoretical implications of this approach, including the potential to evaluate infants in experimental and clinical settings, and to better understand the factors that modulate early communicative capacities and selective attention to relevant information.

## CLINICAL AND SOCIAL IMPLICATIONS OF DISGUST SENSITIVITY

*Proponente: Maria Serena Panasiti (Dipartimento di Psicologia, Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma)*

Although pivotal for disease-avoidance and survival, disgust can have detrimental effects, especially when exaggerated. Outwards disgust responses can be directed towards offensive and potentially contaminating physical targets, but even towards higher-order targets such as people who violate moral norms. Interestingly, disgust responses might also be directed inwards, toward the self. Maladaptive disgust is present in several neurological and psychiatric conditions and is also known to influence many social processes such as prejudice and ingroup bias. This multidisciplinary symposium aims at highlighting both clinical and social implications of disgust sensitivity. The first contribution will explore what kind of early experiences are mostly associated with the development of disgust sensitivity. The second contribution will describe how disgust and guilt can impact moral decision making in a sample of patients with Obsessive Compulsive Disorder. The third contribution will provide evidence from multiple countries and continents of the link between disgust sensitivity for body odors and xenophobia. Finally, the last presentation will show how disgust sensitivity is an important moderator of the relationship between religiosity and implicit biases.



## BODY ODOR DISGUST SENSITIVITY IS ASSOCIATED WITH XENOPHOBIA IN NINE COUNTRIES ACROSS FIVE CONTINENTS: A PRE-REGISTERED STUDY

*Marco Tullio Liuzza (Università degli Studi 'Magna Græcia' di Catanzaro), Marta Zakrzweska (Department of Psychology, Stockholm University, Sweden), Sandra Challma (Department of Psychology, Stockholm University, Sweden), Torun Lindholm (Department of Psychology, Stockholm University, Sweden), Jonas Olofsson (Department of Psychology, Stockholm University, Sweden)*

Body odor disgust sensitivity (BODS) reflects a behavioral disposition to avoid pathogens, and it may also involve social attitudes. Among participants in the USA, high levels of BODS were associated with stronger xenophobia towards a fictitious refugee group. To test the generalizability of this finding, we analyzed data from 9 countries across five continents (N =6836). Using structural equation modeling, we found support for our preregistered hypotheses: higher BODS levels were associated with more xenophobic attitudes; this relationship was partially explained by perceived dissimilarities of the refugees' norms regarding hygiene and food preparation, and general attitudes toward immigration. Our results support a theoretical notion of how pathogen avoidance is associated with social attitudes: "traditional norms" often involve behaviors that limit inter-group contact, social mobility and situations that might lead to pathogen exposure. Our results also indicate that the positive relationship between BODS and xenophobia is robust across cultures.

## EARLY MEMORIES SENSITIZING DISGUST AND PSYCHOPATHOLOGY: A CLINICAL PERSPECTIVE

*Francesco Mancini (Scuola di Psicoterapia Cognitiva SPC), Olga Ines Luppino (Scuola di Psicoterapia Cognitiva SPC), Alessandra Mancini (Scuola di Psicoterapia Cognitiva SPC)*

Mounting evidences support the link between disgust and morality. Increased disgust sensitivity is observed in Obsessive compulsive disorder, characterized also by the propensity to deontological guilt. However, the literature is scarce regarding which early experiences are associated to high disgust sensitivity (DS). This study aims to explore the content of early memories associated with disgust. Based on the literature, we hypothesized an association between DS and memories of moral criticism. 60 non-clinical participants filled in measures of DS. They were then presented with an auditory disgust induction, after which they recalled early memories through the procedure of Diagnostic Imagery. 10 independent raters assessed the emotional content of the memories on visual-analogical scales. Results showed a positive association between contamination DS and early experiences of being the object of contempt, moral judgment and anger. Importantly, no association was found between DS and the feeling of being left alone, which was rated as the dominant content. These data directly support the centrality of morally-loaded interpersonal experiences in the development of DS, indirectly corroborating the importance of clinical interventions targeting DS vulnerability.

## WHEN DISGUST AND GUILT MIX TOGETHER: THE EFFECT OF DEONTOLOGICAL GUILT ON MORAL BEHAVIOR IN PATIENTS WITH OBSESSIVE COMPULSIVE DISORDER

*Maria Serena Panasiti (Dipartimento di Psicologia, Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma), Alessandra Mancini (Scuola di Psicoterapia Cognitiva SPC), Irene Parisi (Dipartimento di Psicologia, Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma), Ida Gualtieri (Dipartimento di Psicologia, Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma), Francesco Mancini (Scuola di Psicoterapia Cognitiva SPC - Università degli Studi di Roma 'G. Marconi')*

Deontological Guilt (DG), and Altruistic Guilt (AG) emerge from the appraisal of violating an internalized rule or an altruistic principle, respectively. DG is strictly connected with Disgust Sensitivity and plays a key role in the development and maintenance of Obsessive-Compulsive Disorder (OCD). Previous studies showed that after the induction of DG, people high in Disgust Sensitivity show more selfish and immoral behavior, supposedly because their moral self-image gets worse. In this study, we tested how the induction of DG could influence moral behavior in patients with OCD. 15 OCD patients and 12 age-matched healthy controls performed the Temptation to lie Card Game, an experimental paradigm where they could decide whether to lie (egoistically or altruistically) or not to another player. They performed the game in three conditions where different emotional faces could prime either DG, AG or a neutral state. Preliminary results confirm that DG enhances egoistic behaviors in all participants. However, while in controls DG was also associated to a drop in reaction times when they had to decide whether to lie egoistically, this was not the case for OCD patients, suggesting that making moral decisions in this emotional state might be particularly conflictual for them.

## DISGUST SENSITIVITY AND APPETITE MODERATE IMPLICIT PREJUDICE TOWARDS MINORITIES IN RELIGIOUS VS. NON-RELIGIOUS INDIVIDUALS

*Carmelo Mario Vicario (Università degli Studi di Messina), Chiara Lucifora (Università degli Studi di Messina), Giorgio Grasso (Università degli Studi di Messina)*

Recent literature on the relationship between appetite and psychological states suggests that our degree of appetite influences our explicit moral judgments and our social cooperation. We present the first study to test the influence of appetite on moral violations measured through implicit negative reactions. Three Implicit Association Tests addressing race, sexuality and weight prejudice were performed by a group of participants under fasting and after having eaten a snack. We also collected data on disgust sensitivity and religiosity, which are known to affect prejudice. Moreover, we measured the participants' ability to feel the sensations of their own body. Our results showed that implicit prejudice was higher among believers than non-believers. This effect was qualified by significant interactions indicating that disgust sensitivity plays a moderating role among believers' automatic reactions towards obese target individuals, while appetite moderates negative automatic responses towards gay men and lesbian women in non-believers. We discussed these results in relation to the literature on subtle forms of prejudice and the dissociation between the explicit and implicit levels of prejudice expression highlighting the role played by individual differences variables.

## FOR A TRANSFORMED MANAGEMENT: THE CONTRIBUTION OF SOCIAL, WORK AND ORGANIZATIONAL PSYCHOLOGY

*Proponente: Giuseppe Scaratti (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Dwelling in and going through organizational scenarios characterized by dimensions of uncertainty, volatility, complexity and ambiguity, emerging from the dramatic transformations taking place, asks for a renewed interpretation of management at an institutional, organizational, social and operational level. The challenges that emerging organizational contexts must face concern the governance of the unexpected; the different architecture of work processes; orientation to new values; the high organizational reliability required for appropriate governance. The influence of these material and immaterial conditions is determining the need for a reconfiguration of management at all levels. Symposium contributions explore the relationship between crisis management and organizational identification; the affective dimensions at play in the dynamics of belonging in smartworking situations; the reconfiguration of national research projects centered on managerial innovation practices; the prospect of a new manifesto for generative management.

## WORKPLACE ENVIRONMENTAL COMFORT IN REMOTE WORKING: THE IMPACT ON ORGANIZATIONAL IDENTIFICATION

*Alessandro Lorenzo Mura (Sapienza Università di Roma)*

The COVID-19 pandemic period was marked by the widespread usage of online technologies worldwide. In March 2020, it was estimated that over 6.6 million Italian workers worked remotely (i.e., 41% of the active national workforce). Little attention is given to the home environment's impact on an individual's well-being, especially in cases when the private and work environments are indistinguishable. Furthermore, little research has been done on the relationship between remote working and maintaining organizational identification. This study aims to investigate the relationship between the domestic work environment, satisfaction with smart working, need to belong, and organizational identification. The study involved 464 Italian remote workers. The perceived workplace environmental quality indicators (PWEQI) have been developed, and a moderate-mediation model was tested. It was discovered that while a higher perception of comfort improves satisfaction with smart working, the latter has a negative impact on organizational identification, particularly in workers who have a low need to belong. It is argued that working at a distance does not result in lower productivity but rather in a broader emotional disengagement from the organization, which could lead to high turnover intentions.

## COPING WITH ORGANIZATIONAL CRISIS: BUFFERING EFFECTS OF ORGANIZATION SECTOR PROTOTYPICALITY AND EMPLOYEE ORGANIZATIONAL IDENTIFICATION

*Gennaro Pica (Università di Camerino), Erica Pugliese (Sapienza Università di Roma), Flavia Bonaiuto (Universitas Mercatorum), Uberta Ganucci Cancellieri (Dipartimento di Scienze della Società e della Formazione d'Area Mediterranea, Università per Stranieri "Dante Alighieri"), Daan Van Knippenberg (Drexel University LeBow College of Business, USA), Marino Bonaiuto (Sapienza Università di Roma)*

We explored the interactive role of an organization's sector prototypicality (the extent to which the organization embodies the prototype of its market sector) and employees' identification with their organization in buffering crises' negative effects on perceived organizational performance. We suggest that: (1) highly prototypical organizations are perceived as more able to cope with organizational crisis, because of their capacity to reduce the threat associated with crisis, and that (2) this effect is augmented when employees more strongly identify with their organization, presumably because of a higher trust in the organization's capacity to efficiently cope with crisis. Findings from two studies confirmed the hypotheses, by manipulating (Study 1) and measuring (Study 2) organizational crisis and the organization's sector prototypicality, and by focusing on potential employees (Study 1) and on employees of a company facing a financial crisis (Study 2). Theoretical and applied implications of results are discussed.

## TOWARDS NEW PRIN'S DESIGN: INNOVATIVE EXPERIENCES OF ORGANIZATIONAL AND ENTREPRENEURIAL SUSTAINABILITY

*Giuseppe Santisi (Dipartimento di Scienze della Formazione, Università di Catania)*

The COVID-19 emergency has prompted the transformations brought about by the Fourth Industrial Revolution. Technological innovations and globalization constantly challenge traditional organizational structures, introducing the need for a change in existing balances to adaptively transform acquired operational routines into new operational practices for solving unexpected problems. This challenge involves profound changes in organizational cultures. The basic idea is that organizations are social contexts in which sustainability is closely connected to the subjectivity of the actors, the reliability of their actions, and the cultures they carry. The emphasis is on both structural aspects and organizational reality as a socially constructed artefact. Here we present the methodological path through which a research network, adopting a transdisciplinary approach that brings together visions of business organization, management engineering, organizational psychology, aims to explore the concrete practices of managerial innovation that have been consolidated in recent years in the face of the pandemic emergency that the entrepreneurial system has experienced.



## TOWARDS A NEW MANIFESTO OF MANAGEMENT

*Giuseppe Scaratti (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Massimiliano Barattucci (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Fabio Cecchinato (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Seeking for generative communities, capable of renewed responsibility and citizenship, a radical paradigm shift is needed aimed at generating collective value (economic, social, environmental, cultural). Tuning into this perspective means, on the one hand, developing a profound effort to rethink and reconfigure the ways of conceiving and practicing the function and activities related to the management of human resources; on the other, it involves taking seriously what the Business Roundtable, an association of more than 180 CEOs of major American corporations, said in August 2019, recommending that companies change the way they do business and focus on their own employees, on the places where they do business and on their suppliers to ensure that all are treated fairly, putting these aspects before the needs and wishes of the shareholders. The contribution proposes some statements that urge a critical reworking of the current mainstream in the way of conceiving management, suggesting a possible new HRM manifesto. Visions and new configurations are needed, open to multiple possible solutions and capacities for a design that is as courageous and creative as it is sustainable and capable of intercepting and transforming current practices and customs.

# GAMES, ROBOTS, TECHNOLOGIES, ARTIFICIAL INTELLIGENCE, LEARNING. SYMPOSIUM IN MEMORY OF ORAZIO MIGLINO

*Proponenti: Luigia Simona Sica (Università degli Studi di Napoli Federico II), Michela Ponticorvo (Università degli Studi di Napoli Federico II), Davide Marocco (Università degli Studi di Napoli Federico II)*

Proponents: Luigia Simona Sica, Michela Ponticorvo, Davide Marocco This symposium aims to be a reflection on the intertwining between technology and psychology: technology impacts, influences, assists, and improves our life in different ways, at different level and at different ages. The academic fields of psychology are increasingly facing the issues related with technology in human life, including experimental psychology, development and educational psychology, psychometrics and so on. More specifically, psychological research has proposed a broad spectrum of different methodologies aimed at impacting people's life at work, at school, in health sectors. Specifically, the contribution of University of Milano describes how robots with different physical anthropomorphism modify individual and collective game activities in a sample of children. The second contribution (University of Bari) focuses on the relationship between socio-materiality and technology in secondary school. The third contribution (University of Foggia) presents the BLUE ARROW project that aims to propose an innovative psycho-pedagogical approach for distance learning. The last contribution (University of Naples Federico II) retraces some experiences by Orazio Miglino developed at NAC Lab.

## DO WE PLAY WITH THE ROBOT TODAY? ROBOTS AS MEDIATORS OF PLAY ACTIVITIES IN NURSERY SCHOOL

*Gisella Rossini (Università Cattolica del Sacro Cuore)*

The study of interactions between children and robots in the 18-36 months age group is important to understand whether robots can be mediators of children's play activities. The aim of the research was to explore how different types of robots, varying in their level of physical anthropomorphization, influence individual and group play activities of a class of children (N=6) between 18 and 36 months of age. Children were observed in two free group play sessions during which they could play with the more humanoid Idol robot and the more mechanical Pixy robot. Through a microgenetic method of analysis, we identified the following units of analysis of children's activities: the role and function of the adults, sensory-motor exploration, the role of sociomaterial characteristics of robots in child-robot interaction and in symbolic play, group disputes, and imitation of robot actions. Qualitative analysis of videos of interactions show that children's play activities changed as function of to the type of robot. In particular, in group play situations, the humanoid robot is a promoter of pretend play. The observations of this study provide interesting insights into the use of robots in nursery school.

## SOCIO-MATERIALITY AND TECHNOLOGY: EXPERIENCES IN SECONDARY LOWER SCHOOL

*Maria Beatrice Ligorio (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Giuseppe Ritella (University of Helsinki, Finland), Feldia Fedela Loperfido (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Maria Antonietta Impedovo (Aix-Marseille University France)*

Recent studies emphasized how the social and the material are intertwined in educational practice mediated by technology. Some research has started to theoretically conceptualize and empirically operationalize the complexity of socio-material relations in the context of making-based activities, characterized by planning and constructing tangible virtual or material objects. Nevertheless, the understanding of hybridization of semiotic, social and material processes and their learning potential is still underdeveloped. To this aim, the dialogical perspective can be fruitfully employed. In this presentation we select and discuss excerpts gathered during three focus group discussions (FGDs) conducted with seven students (6 M; 1 F; aged 11-12) attending lower secondary school. The activities examined during the FGDs were proposed by the teacher as open ended task, based on educational robotics, cloud-based animation software and simplified visual programming software. Our results shed light on how the technology-mediated activity provided valuable opportunities for opening a dialogic space where building “material” objects is a mean for students to express their own voice in interaction with both human and non-human Others.

## ROBOTICS AT SCHOOL TO FOSTER LEARNING AND IMPROVE SOCIAL RELATIONSHIPS

*Onofrio Gigliotta (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Michela Ponticorvo (Università degli Studi di Napoli Federico II), Luigia Simona Sica (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Davide Marocco (Università degli Studi di Napoli Federico II)*

Educational robotics (ER) can be fruitfully applied to soft skills, as it allows promoting social links between students, if it is proposed as a group activity. We present a study on how educational robotics can be applied to learning soft skills together with STEM. Our research hypothesis was that ER can be more effective in promoting positive ties if compared with other activities. **Materials and Methods** Participants: 70 participants at middle school first-year: 38 females and 32 males; mean age 10.48 years. For school needs, each group was randomly assigned to a condition of the experimental design: group 1 carried out the ER laboratory; group 2 performed the coding laboratory; group 3 was involved in other group activity. To assess social relations, we administered the sociometric test of Moreno before and after the activities. **Results:** Whereas no statistically significant difference was found at pre-test, at the post-test, there is a significant difference in selections:  $F(2, 67) = 7.569$ ;  $p = 0.001$ . The post-hoc comparisons (Bonferroni method) indicate that a statistically detectable difference emerges between the robotics condition and the control group: average difference = 4.043;  $p = 0.001$ . These results confirm that ER can be effective in promoting social ties.

## SUPPORTING DISTANCE TEACHING IN COVID-19 USING TANGIBLE USER INTERFACES FOR KINDERGARTEN AND PRIMARY SCHOOL TEACHERS: THE BLUE ARROW PROJECT

*Raffaele Di Fuccio (Università degli Studi di Foggia), Giusi Antonia Toto (Università degli Studi di Foggia), Guendalina Peconio (Università degli Studi di Foggia), Benedetta Ragni (Università degli Studi di Foggia), Francesco Sulla (Università degli Studi di Foggia), Pierpaolo Limone (Università degli Studi di Foggia)*

During the pandemic crisis, the teaching sector exposed its fragilities and its adaptability. The new approaches for teaching during the COVID-19 lockdowns have a huge impact on the education in kindergartens and primary schools where children need to learn by experience, drawing or manipulating things without writing and reading skills. Well-known psycho-pedagogical practices based on Montessori approach could be a useful approach to face the distance teaching/learning but needs of a concrete interface. The merge between these two sides – digital and physical – is addressable with the application of tangible user interfaces (TUI) paradigm (Ishii, 2008). TUIs couple physical representations (e.g., spatially manipulable physical objects) with digital representations (e.g., graphics and audio) (Di Ferdinando et al. 2015). Moreover, TUI are easily adaptable for multisensory and interactive storytelling (Krestanova et al., 2021; Di Fuccio et al., 2018) based on practical activities by manipulating objects and experience them with all senses side (Ponticorvo et al., 2018). Based on this background, we present the BLUE ARROW project that aims to propose an innovative psycho-pedagogical approach for teacher education ((ITE and CPD) for distance learning based on TUI application.

# INDIVIDUAL, RELATIONAL, AND CONTEXTUAL CORRELATES OF SOCIAL MEDIA USE: INTERDISCIPLINARY THEORETICAL AND METHODOLOGICAL PERSPECTIVES

*Proponente: Gianluca Gini (Università degli Studi di Padova)*

Social media are an important context of socialization for adolescents, young adults, and adults, because they allow users to satisfy several psychological needs. Current psychological literature includes a great variety of studies in which theoretical frameworks, research questions, and methods for data collection largely reflect researchers' background. On one hand, this heterogeneity demonstrates the richness of psychological research on social media (mis)use; on the other hand, however, it might limit our understanding of this complex phenomenon. The aim of this interdisciplinary symposium is to promote discussion among Italian researchers who are member of three different AIP sections; they will contribute with empirical studies respectively about (i) the role of economic inequalities in problematic social media use among early adolescents (social community psychology), (ii) the role of social media in adolescents' friendship relationships (developmental psychology), (iii) the association between the use of Instagram and symptoms of body dysmorphic disorder among young adults, and (iv) the role of attachment, emotional dysregulation and motivations in problematic social network use and online social anxiety among adults (clinical-dynamic psychology).

## BODY SHAME AND PROBLEMATIC SOCIAL NETWORKING SITES USE: THE MEDIATING EFFECT OF PERFECTIONISTIC SELF-PRESENTATION STYLE AND BODY IMAGE CONTROL IN PHOTOS

*Simon Ghinassi (Dipartimento di Medicina Sperimentale e Clinica, Università degli Studi di Firenze),  
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The link between Body Shame (BS) and Problematic Social Network Sites Use (PSNSU) mediated by self-presentation tactics (e. g., Body Image Control in SNSs photos, BIC) has been discussed as a strategy for individuals with high BS to increase their acceptance and attain social goals. The current study aims to build upon previous evidence by examining the role of Perfectionistic Self-Presentation (PSP) in the relationship between BS, BIC and PSNSU. We hypothesized that individuals with high BS may develop PSNSU through the serial mediating role of PSPS and BIC. A sample of 695 participants (% F = 61.29; Mage = 21.01 ± 5.05) completed measures of BS, PSP, BIC and PSNSU. The hypothesized serial mediation effect of PSP and BIC in the association between BS and PSNSU was significant (indirect effect = 0.05; 95% CI: [0.02, 0.07] for women; indirect effect = 0.02; 95% CI: [0.002, 0.04] for men). This study leads to novel findings in the field of PSNSU and self-objectification research. Young people – be them women or men – who feel ashamed of their body may promote a perfect image as compensatory strategy, and the gratification of the need for self-presentation through body image control in SNSs photos activities could, in turn, lead to PSNSU.



## LINKING ATTACHMENT TO PROBLEMATIC SOCIAL NETWORKING SITES USE AND ONLINE SOCIAL ANXIETY. THE MEDIATING ROLE OF EMOTION DYSREGULATION AND MOTIVES FOR SOCIAL NETWORKING SITES USE

*Tommaso Manari (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma), Claudia Marino (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Marcantonio M. Spada (Division of Psychology, School of Applied Sciences, London South Bank University, UK), Christian Franceschini (Dipartimento di Medicina e Chirurgia, Università di Parma), Alessandro Musetti (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma)*

Problematic Social Networking Sites Use (PSNSU) and online social anxiety are emerging phenomena whose risk factors are still poorly known. The present study aimed to examine the relationship between attachment anxiety, attachment avoidance, PSNSU and online social anxiety, and the mediating role of emotion dysregulation and four motives to use SNSs (coping, conformity, enhancement, social). An online survey was administered to 769 SNSs users (50.5% females, Mage = 28.89, SDage = 8.05). The path analysis revealed a weak association between the dimensions of insecure attachment and online social anxiety. Emotion dysregulation had a mediating role in the positive associations between attachment anxiety and the two outcomes of PSNSU and online social anxiety, as well as a serial mediation of emotion dysregulation and four and three motives respectively. The social motive mediated the positive associations between attachment avoidance and the two outcomes. These findings advance our knowledge of the psychological factors underlying the relationship between the variables. Emotion dysregulation and different motives to use SNSs are linked to two aspects of maladaptive SNSs usage (i.e., PSNSU and online social anxiety), therefore preventive and therapeutic treatments might be used.

## DO SOCIAL MEDIA USE SUPPORT ADOLESCENTS' PEER RELATIONS? THE ROLE OF SOCIAL MEDIA FEATURES AND ADOLESCENTS' ONLINE BEHAVIOR IN PERCEIVED FRIENDSHIP QUALITY

*Gianluca Gini (Università degli Studi di Padova), Federica Angelini (Università degli Studi di Padova)*

Although there is growing interest in understanding what role social media play in adolescents' experiences, little is known about how the way they connect and communicate online with friends is associated with the quality of their friendship relationships. This study aims to test the possible associations of specific characteristics of social media (i.e., availability, visualness, and permanence) with the frequency of adolescents' and their friends' online behaviors to satisfy relational tasks (e.g., commenting and "liking" friends' posts or being tagged in a photo) in contributing to perceived friendship quality. Participants were 751 Italian adolescents (56.6% females; Mage=16.2, SD = 1.5). Results of a SEM analysis showed that different perceived social media features were significantly associated with the frequency of adolescents and their friends' online behaviors and, in turn, with perceived friendship quality. Gender differences were also explored through multi-group analysis. Overall, these findings provide support for the importance of considering social media as a social context to better understand how today's youth maintain and support their friendship relations online.

## CAN AN EQUAL WORLD REDUCE PROBLEMATIC SOCIAL MEDIA USE? EVIDENCE FROM THE HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN STUDY IN 44 COUNTRIES

*Michela Lenzi (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Alessio Vieno (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Maria Grazia Monaci (Dipartimento di Scienze Umane e Sociali, Università della Valle d'Aosta), Frank Elgar (Institute for Health and Social Policy, McGill University, Canada)*

Research on the social determinants of Problematic Social Media Use (PSMU) among adolescents is scant and focused on interpersonal relationships. This study examines the relation of PSMU with economic inequality, measured at country, school and individual levels and evaluates the moderating role of family and peer support. The 2017/18 Health Behaviour in School-aged Children (HBSC) study measured PSMU in 192,144 adolescents aged 11-, 13- and 15-year-olds from 6,407 schools in 44 countries and sub-regions of Belgium (Flanders and Wallonia) and the United Kingdom (England, Scotland, and Wales). Associations between inequality and PSMU were tested using multilevel logistic regression analyses. Results showed that adolescents who were relatively more deprived than their schoolmates and attended more economically unequal schools had a higher likelihood of reporting PSMU. In addition, school wealth inequality was more closely related to PSMU among adolescents with lower levels of peer support. A similar effect of country income inequality was found, but only in adolescents who reported low family support. Our findings expand the existing literature on the detrimental impact of inequalities on adolescent wellbeing by showing the role of inequalities in the engagement in PSMU.

## INTENSIVE LONGITUDINAL METHODS: WHAT OPPORTUNITIES FOR RESEARCH IN PSYCHOLOGY?

*Proponente: Angela Sorgente (Università Cattolica del Sacro Cuore)*

Intensive longitudinal (IL) methods are increasingly spreading in all fields of Psychology as they offer several opportunities: 1) to reduce the effect of recall biases; 2) to observe processes of change; 3) to test within-subject processes using within-subject data. The current symposium presents exemplifications of IL methods through 4 contributions. Sorgente et al. adopted the IL methods to investigate the intra-individual relationship between emerging adults' financial well-being and stress. Zambelli & Tagliabue investigated whether daily dynamics of the meaning-making process differ according to emerging adults' transitional conditions. Filosa et al. explored the associations between employees' self-esteem and diurnal cortisol pattern indices during the same working days. Finally, Landolfi & Lo Presti verified whether the positive/negative affect experienced during a working day played a mediational role in the associations between daily work-family conflict and work-family enrichment/balance. These presentations will offer an overview of different IL designs (interval-, signal-contingent), instruments (self-report, physiological), statistical techniques (Multi-level analysis, Dynamic SEM, Network Psychometrics) and will exemplify the relevance of within-subject processes.

## FINANCIAL WELL-BEING AND FINANCIAL STRESS: WHICH RELATIONSHIP AT DAILY LEVEL?

*Angela Sorgente (Università Cattolica del Sacro Cuore), Margherita Lanz (Università Cattolica del Sacro Cuore)*

Many cross-sectional studies investigated the relationship between financial well-being (FW; evaluation of own financial condition) and financial stress (FS; perception of non-ability to meet expenses), finding a strong relationship between these constructs (e.g., Choi et al., 2020). As recent studies (Totenhagen et al., 2018) suggest that individuals' perceptions of FW and FS can fluctuate from day-to-day, we aim to investigate their relationship at daily level in order to assess intra-individual change (within-person approach) and complement the body of existing research (between-person approach). Data about FW and FS were daily collected for 14 days from a sample of 158 emerging adults (70.3 % female). Data were analyzed using multi-level Dynamic SEM (Hamaker et al., 2018). Results indicate that the relationship between FW and FS is much weaker at within-level than between-level. In particular, the two constructs are weakly related within the same day (significant covariance) and they are not related over days (non-significant cross-lagged effects). The daily investigation of FW and FS could help to identify within-person factors that affect such constructs and inform effective practice and policy.

## EXAMINING INDIVIDUAL DIFFERENCES IN THE DAILY DYNAMICS OF THE MEANING-MAKING PROCESS WITH NETWORK PSYCHOMETRICS

*Michela Zambelli (Università Cattolica del Sacro Cuore), Semira Tagliabue (Università Cattolica del Sacro Cuore di Brescia)*

One of the most promising statistical approaches to analyze intensive longitudinal data is Network Psychometrics (Borsboom et al., 2022) that allows investigating how different elements of a system interact across occasions. The present work aimed at understanding whether daily dynamics of the meaning-making process differ according to emerging adults' transitional condition (balanced vs imbalanced) in the love and work domains. 318 Italian emerging adults (Mage=25.4; 28% males) participated in a 14-days diary study, by filling in a six-item self-report measure of situational meaning in life (SMILE; Zambelli & Tagliabue, 2022). The Psychometrics toolbox (Epskamp, 2021) was used to identify within-subject dynamics (contemporaneous and temporal effects over time) and between-subject dynamics (stable individual differences) of meaning-making; and examine if these dynamics differ according to the transitional condition. Results revealed differences in temporal dynamics (love:Chi2=73.3;  $p<.001$ ; work:Chi2=54.3;  $p=.03$ ), with a richer path showed by imbalanced youths; and in between subjects dynamics (love:Chi2=37.9;  $p=.001$ ; work:Chi2=43.7;  $p<.001$ ) with balanced in love showing a stronger association between purpose and mattering, and imbalanced in work only few significant associations.

## THE ASSOCIATION OF SELF-ESTEEM INSTABILITY WITH DIURNAL CORTISOL PATTERNS IN A SAMPLE OF ADULT WORKERS

*Lorenzo Filosa (Dipartimento di Psicologia, Sapienza Università di Roma), Enrico Perinelli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Luca Carnevali (Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale, Università di Parma)*

Past research on self-esteem instability pointed to stable and high self-esteem as correlated with indices of resilience and adjustment, whereas unstable and low self-esteem has been linked, with maladjustment in the general population. However, correlates of self-esteem instability in the work setting have been poorly investigated. In this study we explored the relations between self-esteem instability and physiological reactions at work. Using intensive longitudinal data from N = 166 workers, collected during two consecutive working days, we analyzed associations between self-esteem state levels and variability, and their interaction, with diurnal cortisol pattern indices (i.e., CAR, DCS, AUCg), collected through saliva samples during the same days. Results revealed associations between self-esteem average levels and instability forms, and diurnal cortisol variation, such that: (1) the interaction between self-esteem levels and instability suggested that the relationship between average self-esteem and CAR was stronger when self-esteem instability was low (vs. high); (2) only self-esteem instability positively predicted DCS and (3) negatively AUCg. Findings highlight potential mechanisms by which short-term patterns of self-esteem states may impact diurnal cortisol patterns.

## POSITIVE AFFECT AT WORK, GREATER BALANCE AT HOME. A MULTILEVEL MEDIATIONAL MODEL APPLIED TO A DAILY DIARY STUDY ON WORK-FAMILY BALANCE

*Alfonso Landolfi (Università degli Studi della Campania 'Luigi Vanvitelli'), Alessandro Lo Presti (Università degli Studi della Campania 'Luigi Vanvitelli')*

Change and developmental studies are now common in scientific enquiry and require longitudinal and often diary data. The dynamics pertaining to work-family interface such as conflict, enrichment, has received considerable scholarly attention. However, the daily processes that are involved have been examined to a lesser extent, least of all including the role played by emotions. This study aimed at examining, through a multilevel mediational model, if positive and negative affect experienced during the working day played a mediational role in the associations between daily levels of work-family conflict and work-family enrichment on one side, and work-family balance on the other. Moreover, the moderating cross-level role of trait emotional stability was examined. The study involved a sample of 104 Italian employees who completed a diary-book over five consecutive working days. Multilevel-modelling results highlighted, controlling for emotional stability, a mediational role of daily positive affect in the relationships between both work-family conflict and enrichment on the one side and work-family balance on the other. This study contributed to the literature emphasizing the role of positive affective states experienced at the workplace and their connections with the private life.



# NEGOTIATING THE CHALLENGES FOR A SUSTAINABLE AND INCLUSIVE SOCIETY: THE ROLE OF PSYCHOLOGICAL RESOURCES AND EXTERNAL SUPPORT

*Proponenti: Anna Parola (Università degli Studi di Napoli Federico II), Andrea Zammiti (Università di Catania)*

Preparing for the future is a substantial challenge for adolescents. Today's society, mainly characterized by uncertainty and instability in the labor market, makes it increasingly difficult for adolescents and young people looking for future careers. In this scenario, the four contributions present a wide picture of the personal resources and external support that can help adolescents and young adults tackle these challenges. The contribution of Russo describes the role of self-efficacy, optimism and hope, as internal resources, and parental career-related support on adolescents' life satisfaction. Parola, Pettignano and Marcionetti propose the development and psychometric evaluation of a new instrument to assess the teacher career-related support. Fusco presents a longitudinal study focused on the impact of vocational processes on psychological and career outcomes after the end of high school. Finally, Di Maggio, Santilli, Ginevra and Nota show the effectiveness of Life Design interventions in promoting adolescents' critical consciousness and reflexivity about the future. The Symposium provides the possibility to capture the complexity of career transitions and reflects on the ways to promote a sustainable and inclusive society.

## SELF-EFFICACY, OPTIMISM, AND HOPE AS BOOSTERS OF THE EFFECT OF PERCEIVED PARENTAL CAREER-RELATED SUPPORT ON ADOLESCENT LIFE SATISFACTION

*Angela Russo (Dipartimento di Scienze della Formazione, Università di Catania)*

Parental support helps adolescents to make satisfying career-related choices, providing guidance and instrumental support. Similarly, literature has shown that some psychological resources, such as the perception of personal effectiveness, optimism and hope can also enhance life satisfaction in adolescents. The present study hypothesizes that dispositional self-efficacy, optimism, and hope would booster the effect of perceived parental support in career choices on adolescent life satisfaction. Participants were 253 adolescents (124 females, 49%) aged between 11 and 14 ( $M = 12.58$ ,  $SD = 0.63$ ) who responded to: Parental Career-Related Behaviors Questionnaire, General Self-Efficacy Scale, Optimism Scale of Visions about future, Hope scale of Visions about future, Satisfaction With Life Scale. Results of mediation analysis showed that self-efficacy, optimism, and hope mediates the relationship between parental career-related support and life satisfaction. In career counseling practice with adolescents, these findings emphasize the importance of combining parenting-based interventions to promote parental career-related support with prevention-based interventions for adolescents, to enhance self-efficacy, optimism and hope, which may ultimately facilitate adolescents' life satisfaction.

## DEVELOPMENT AND VALIDATION OF TEACHER CAREER-RELATED BEHAVIORS QUESTIONNAIRE (TCB)

*Anna Parola (Università degli Studi di Napoli Federico II), Marina Pettignano (Scuola Universitaria Professionale della Svizzera Italiana), Jenny Marcionetti (Scuola Universitaria Professionale della Svizzera Italiana)*

Career-related teacher support is the teachers' behaviour toward students as invested caregivers and a source of positive career expectations, information and support in career development. To our knowledge, there are no studies that focus on teachers' perception of their role of support in pupils' career development, and no instruments exist to measure it. The aim of this study, conducted in Italy, was to develop this measure. Three experts in career development produced an initial pool of 51 items to assess the target constructs. A pilot study was conducted on 20 teachers to ensure that items were appropriate and comprehension adequate. Then, items were administered to 232 teachers to test for factor structure. A series of EFAs permitted to delete cross-loading and inadequate items. A final six-factor version containing 36 items was obtained: Get ready (5-items), Empower Self (5-items), Get curious (5-items), Empower Skills (9-items), Emotional support (5-items), Instrumental Support (7-items). A CFA further confirmed the adequacy of the six-factor solution and of items assigned to each factor on a sample of 294 teachers. Social desirability effect was assessed. Moreover, concurrent validity was tested with self-efficacy and career decision self-efficacy measures.

## IDENTITY, CHOICES AND OUTCOMES OF POST-SECONDARY EDUCATION TRANSITION

*Luca Fusco (Università degli Studi di Napoli Federico II)*

Making a career choice at the end of secondary education represents a central transition in the process of building an adult occupational self. These choices affect the individuals' life span on multiple levels and are strictly connected with young people's well-being and maladjustment in late-adolescence and early adulthood. The present study aims to inquire the outcomes of these transitions in Italian high school students. The study followed a two-times longitudinal design. 183 young Italians participated. In T1 (six months before the end of their last school year) students were asked to complete the Vocational Identity Scale Assessment, for measuring their identity processes. In T2, one year later, students were asked to complete The questionnaire for Eudaimonic Well-Being, the Satisfaction with life scale and DASS-21, in order to assess well-being and maladjustment. A structural equation model was tested to evaluate the impact of vocational processes on psychological and career outcomes after the end of school. Results confirmed the positive effect of an early career commitment and identified the mediating role of career choice satisfaction between identification with commitment and well-being after the end of school. Consequences for career guidance will be discussed.

## CONFUSED: A CAREER INTERVENTION FOR INCLUSIVE AND SUSTAINABLE CAREER DESIGN

*Ilaria Di Maggio (Università degli Studi di Padova), Sara Santilli (Università degli Studi di Padova), Maria Cristina Ginevra (Università degli Studi di Padova), Laura Nota (Università degli Studi di Padova)*

Environmental and social crises have produced transformations and modifications in work's features and labor market demands, putting adolescents in front of challenges and new risks for their future. Considering these premises and based on the Life Design approach, the career guidance intervention "CONFUSED - Knowing the present to imagine a Sustainable and Inclusive Future" was developed. It is structured in five different group sessions of two hours each and aimed at promoting adolescents' critical consciousness and reflexivity about the future. Adolescents are trained to reflect on the future, take into account the threats that our society is facing, and thus considering their professional future contribution to the construction of an inclusive and sustainable society. A pre-posttest experimental study was carried out to evaluate the effectiveness of the intervention, involving a total of 152 adolescents randomly assigned to the control and experimental groups. Results revealed that the career intervention improved adolescents' decision-making skills regarding future choices and critical consciousness related to an inclusive and sustainable development. In addition, the results obtained showed good indices of social validity of the intervention.

# PROMOTING WELL-BEING AND COUNTERACTING IMPAIRMENTS IN CHRONIC DISEASES BY INTEGRATING PSYCHOLOGICAL PERSPECTIVES

*Proponente: Caterina Grano (Sapienza Università di Roma)*

Chronic Diseases (CDs) have a huge prevalence that is increasing with the increasing ageing of western societies; to CDs are attributable 71% of the all-cause world mortality (WHO, 2018). They also pose important questions regarding factors that may predict their course as well as factors that may contribute to wellbeing or counteract their negative consequences. The symposium aims to focus on the contributions of psychology research on the processes that determine higher well-being and counteract impairments within chronic diseases. The first contribution focuses on the role of oxytocin in counteracting social impairments associated with frontotemporal dementia. The second contribution analyses the role of psychological variables in the progression of hypertension. The third contribution examines from a social psychology perspective the role of body image on well-being and psychological inflexibility in women who had breast cancer. The last contribution presents the results of a meta-analysis on subjective sleep in patients with inflammatory bowel disease (IBD) and explores the longitudinal associations between insomnia, quality of life and inflammatory markers of IBD activity. Novel frameworks to reduce stress and social impairment and to promote well-being will be explored.

## EMOTION RECOGNITION IN BEHAVIORAL VARIANT FRONTOTEMPORAL DEMENTIA, INTEGRATING CLINICAL, EXPERIMENTAL AND PSYCHOBIOLOGICAL PERSPECTIVES

*Valentina Colonnello (Dipartimento di Medicina Specialistica Diagnostica e Sperimentale, Università di Bologna), Paolo Maria Russo (Dipartimento di Medicina Specialistica Diagnostica e Sperimentale, Università di Bologna)*

Behavioral variant frontotemporal dementia (bvFTD), a disease with presenile onset, is the most common manifestation of frontotemporal neurodegeneration. Individuals diagnosed with bvFTD show progressive impairments in social cognition and in their ability to empathize with others. Though no efficacious therapeutic strategies for bvFTD have yet been identified, progress in affective neuroscience has yielded new insights into the basic brain systems underlying social behavior and sensitivity to the interpersonal world. The evolutionarily ancient neuropeptide oxytocin has been found to modulate social cognition, and it has been tested for its therapeutic potentials in patients with bvFTD. This contribution first reviews empirical studies on emotion recognition deficits in individuals with bvFTD, integrating experimental and clinical perspectives. It then presents the results on the effects of oxytocin administration in counteracting social impairments associated with bvFTD. The strengths and limitations of the reviewed studies are discussed in light of studies on patient's individual differences and oxytocin's context-dependent effects. This contribution provides a novel and comprehensive framework to better guide future experimental and clinical studies on pathological brain aging

## PSYCHOLOGICAL COVARIATES OF BLOOD PRESSURE AMONG PATIENTS WITH HYPERTENSION AND METABOLIC SYNDROME

*Angelo Compare (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Few studies have rigorously tested the longitudinal interplay between blood pressure (BP) and depressive symptoms, QoL and well-being. Fewer disaggregate the effects of changes of these variables within patients over time from the effects of differences between patients on essential hypertension. 185 patients with hypertension and metabolic syndrome (130 males, 70.3%;  $54 \pm 10.93$  years) volunteered in a multicentre study. We analyzed the longitudinal associations between office or day-time ambulatory BP with depressive symptoms, well-being and QoL, measured at baseline, 36- and 48-week follow-up, through multilevel models and controlling for sociodemographic and clinical factors. Within-person increases in depressive symptoms were significant, positive time-varying covariates of both office and day-time BP, even after controlling for several potential confounders. Within-person increases in well-being and mental health components of QoL had similar negative associations with the level of BP over time. Our findings provide a deeper insight on the relationship between variability of psychological variables within individuals and their levels of BP. Considerations about evidence-based psychological interventions are made.



## MY BODY AND MY HEALTH: BREAST CANCER, WELL-BEING AND POSITIVE BODY IMAGE

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In Italy, breast cancer survivors are increasing (AIRTUM, 2020). This population reports higher levels of body-image concerns associated with higher psychological distress and lower quality of life (Davis et al., 2020). The purpose of this study is to examine the role of negative and positive body image on well-being and psychological-inflexibility in a sample of breast-cancer-survivors. 114 women who have completed breast-cancer-treatment ( $\pm 5$  years), completed a questionnaire to measure the study variables. Hierarchical regressions and any indirect effects were performed. Functionality-appreciation and body-compassion explain a significant percentage of the variance of well-being (34%) and psychological-inflexibility (50%) of the participants. The indirect effect of body-dissatisfaction on well-being and psychological-inflexibility through body-compassion is significant. The results emphasize the relevance of the positive aspect of body-image on well-being and psychological-inflexibility in a group of breast-cancer-survivors. Functionality-appreciation and body-compassion contribute to determine the health-status of these women and could be included in health-promotion interventions to reduce psychological-distress associated with body-image concerns in breast-cancer-survivors.

## HEALTH-RELATED QUALITY OF LIFE AND INSOMNIA IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE

*Andrea Zagaria (Dipartimento di Psicologia, Sapienza Università di Roma), Andrea Ballesio (Dipartimento di Psicologia, Sapienza Università di Roma)*

Disturbed sleep is associated with altered inflammatory response in healthy samples and individuals with chronic inflammatory conditions. In inflammatory bowel disease (IBD), the evidence of sleep impairments is limited. In parallel, activity disease may impair individuals' functioning and jeopardise health-related quality of life (HR-QoL). In a meta-analysis of cross-sectional comparisons, we showed poorer subjective sleep quality in IBD patients than in healthy controls ( $g=.49$ ,  $p<.001$ ). No differences within IBD subtypes were found ( $p=.208$ ). In addition, patients with active IBD reported poorer sleep than those in remission ( $g=.66$ ,  $p<.001$ ). To explore the longitudinal associations between insomnia, quality of life, and inflammatory markers of IBD activity, a cohort of adult patients is currently completing the Insomnia Severity Index (ISI), the Short-Form-12 (SF-12) while serum C-reactive protein (CRP) and faecal calprotectin (FC) are being collected at baseline and 1-year follow-up. Baseline data showed that active patients reported lower physical HR-QoL ( $p<.001$ ) than patients in remission. Lower physical HR-QoL was also associated with higher CRP and FC ( $p<.05$ ). Preliminary results of both studies suggest targeting insomnia and HR-QoL in clinical psychological interventions.

# PSYCHOLOGY AND ECO-GREEN BEHAVIORS: LOOKING AT A DEVELOPMENTAL AND SYSTEMIC PERSPECTIVE

*Proponenti: Simonetta D'amico (Università degli Studi dell'Aquila), Giuseppe Carrus (Università degli Studi Roma Tre)*

Human activity has pushed the planet beyond its natural boundaries, determining a severe and increasing crisis. Tackling such a crisis implies moving to a set of deliberate, effective, and anticipatory actions, also known as Pro-Environmental Behaviors (PEB), focused on safeguarding the natural environment and ensuring the planet's sustainability for today and forthcoming generations. Based on a systemic perspective, the symposium aims to address the impact of individual features, contextual factors, and their interactions on eco-green lifestyles and behaviors aimed at respecting the heritage and common natural assets. Romano's communication focuses on the key role of outdoor activities and natural connection in promoting eco-green behaviors in middle school students. D'Amico explores the relationships among personality traits, cognitive factors, and pro-environmental behaviors in late adolescence. Caffaro addresses the effects of a behavioral change intervention performed in an energy company whose members share ownership of renewable energy plants in Italy. Finally, Menardo's talk focuses on the measurement of PEB and presents the validation process of the Italian version of the Pro-Environmental Behaviors scale and an example of its application.

## WHAT MOTIVATES ADOLESCENTS TO PARTICIPATE IN PRO-ENVIRONMENTAL MOVEMENTS? THE ROLE OF PRO-ENVIRONMENTAL BEHAVIORS, CONNECTEDNESS TO NATURE, AND SOCIAL MEDIA USAGE

*Luciano Romano (Università Europea di Roma), Giuseppe Alessio Carbone (Università Europea di Roma), Caterina Fiorilli (Lumsa Università di Roma)*

Teenagers are paying attention to climate change and are mobilizing to combat it through individual actions, implementing pro-environmental behaviors, and participating in pro-environmental movements. Therefore, it is interesting to explore the dynamics that drive adolescents to participate in these movements, also in light of the possible role of social media usage. This study aimed to investigate in a sample of 287 adolescents (14-19; Mage=16.28, SD=0.89; M=84%) the relationship between pro-environmental behaviors and the intention to participate in pro-environmental movements. Furthermore, the mediating role of social media usage (i.e., getting informed and posting pro-environmental content) was explored. Finally, we examined the associations among the above variables at different levels of connectedness to nature. Getting informed and posting pro-environmental content via social media mediate the relation between pro-environmental behaviors and intention to participate in pro-environmental movements. Connectedness to nature moderates the path pro-environmental behaviors/social media usage variables and the path getting informed about pro-environmental content via social media/intention to participate in pro-environmental movements. Practical implications will be discussed.

## THE ASSOCIATION BETWEEN PERSONALITY AND PRO-ENVIRONMENTAL BEHAVIORS: CAPTURING THE MEDIATING ROLE OF DIVERGENT THINKING

*Marco Giancola (Università degli Studi dell'Aquila), Simonetta D'amico (Università degli Studi dell'Aquila)*

Environmental sustainability has become one of the most important aims of the research agenda worldwide. Earth's ecosystem deterioration, indeed, challenges present and forthcoming generations to adopt more suitable behaviors to avoid troubling consequences. In this vein, the study of people's determinants involved in Pro-Environmental Behavior (PEB) is timely. The current research examines the impact of the Big Five (FMM) on PEB, also addressing the mediating role of Divergent Thinking (DT) during late adolescence. One-hundred and fourthly-six participants completed the Big Five Inventory-10, the Pro-Environmental Behavior Scale, and performed the Alternative Uses Task, by which quality (creativity) and quantity (number of uses) of DT were evaluated. Results reveal that Openness, Extraversion, and Agreeableness are indirectly associated with PEB through the full mediation of DT creativity. These findings suggest that youth should invest in and increase their DT competencies to enhance their disposition toward PEB. In this vein, DT can be understood as a key driver for solving current sustainable development challenges.

## PROMOTING ENERGY-EFFICIENT CHOICES: BEHAVIORAL INTERVENTIONS IN AN ENERGY COOPERATIVE

*Federica Caffaro (Università degli Studi Roma Tre), Lorenza Tiberio (Università degli Studi Roma Tre), Giuseppe Carrus (Università degli Studi Roma Tre), Stefano Mastandrea (Università degli Studi Roma Tre), Eugenio De Gregorio (Link Campus University), Chiara Massullo (Università degli Studi Roma Tre)*

This research is part of the EU-funded H2020 project entitled “ENCHANT” whose objective is to provide an analysis of the impact of different behavioral interventions on energy consumption choices. According to previous studies conducted in the field of energy saving, different types of interventions were identified based on theories, models, and research protocols developed in the social sciences and psychology. In this talk, we explore the effects of a behavioral change intervention performed in an energy cooperative whose members share the ownership of renewable energy plants in Italy. An initial questionnaire is administered to cooperative members to understand the relationship between belonging to the energy community and pro-environmental attitudes and behaviors. Groups of members are then exposed to behavioral change strategies, including information, social norms, and feedback on energy consumption. Afterward, the questionnaire is re-administered to assess the effectiveness of the implemented strategies. Throughout the intervention, actual energy consumption data is also collected. In summarizing the outcomes, key factors that contribute to the effectiveness of the proposed interventions are identified and discussed. Data analysis of the last phase is still in progress.

## THE ITALIAN VERSION OF THE PRO-ENVIRONMENTAL BEHAVIOURS SCALE (PEBS): VALIDATION PROCESS AND A PRACTICAL APPLICATION

*Elisa Menardo (Università di Verona), Margherita Pasini (Università di Verona)*

There are several empirical evidence that the greatest long-term threat the world is facing is human actions that produce irreversible and damaging changes to the environmental conditions that sustain life. Unlike the high commitment of environmental psychologists to identifying the predictors of pro-environmental behaviors, little interest has been paid to the development of adequate measurement tools. Lack of consensus about which pro-environmental behaviors measurement tool to use makes comparisons between studies complex and reflects a lack of consensus about which behaviors should actually be measured. Among the tools proposed by the literature, the Pro-Environmental Behavior Scale (PEBS; Markle, 2013) appears to be a complete tool as it investigates both categories of pro-environmental behaviors proposed by the literature (behaviors in the public sphere and those in the private sphere) that have a high impact on the environment. In this work, we present the validation process of the scale after having adapted it to the Italian context. In addition, we present a practical application of the scale in a survey on the relationship between pro-environmental behaviors and some predictors (e.g., connection with nature).

# REPRODUCIBILITY OF RESEARCH PROTOCOLS ACROSS PSYCHOLOGICAL FIELDS: A PREREQUISITE FOR THE REPLICABILITY OF RESEARCH RESULTS

*Proponenti: Cristiano Costa (Università degli Studi di Padova), Massimo Grassi (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Gian Mauro Manzoni (Facoltà di Psicologia, eCampus University), Cristina Zogmaister (Università degli Studi di Milano-Bicocca)*

Psychology has been recently under scrutiny because of the so-called “crisis of confidence” in that many results of the literature were found to be not replicable. Replicability of results is definitely the target that a mature science should drive to. However, the recent crises enabled revealing the existence of several weak links in the process that drives research to publication. One of the weak links is the reproducibility of the research protocols we write in our papers such as the clinical protocols adopted in one study, the exact stimuli and procedure adopted by a laboratory research in cognitive psychology, the instructions and questions in a social psychology study, or the exact method adopted in study recruiting baby participants. The present symposium shows examples of works that aim to improve the reproducibility of protocols in clinical, experimental, social and developmental psychology. The symposium also aims to provide directions for future works in the same fields.



## LET'S SHARE AND COLLABORATE: INCREASING REPRODUCIBILITY IN DEVELOPMENTAL SCIENCE

*Giulia Calignano (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Testing the reliability of a prior finding using the same data and the same analysis strategies can be a tricky work to carry out in cognitive psychology, including developmental psychology. This talk starts by presenting a few examples of some highly cited but hard-to-reproduce studies in infancy and child research showing (a) a poor description of the step-by-step rationale that guided the methodological choices and (b) unavailability of data and materials. As an ambitious and challenging solution to those issues, the talk presents the ManyBabies project, an international, collaborative multilab project focusing on both reproducibility and conceptual replication of key findings and best practices in developmental research involving infants and families across cultures and BabyLabs. The last part of the talk will offer some basic yet potentially good advices to increase reproducibility, hence reliability in every-day practices in developmental science.

## SHARING RESEARCH MATERIALS IN SOCIAL PSYCHOLOGY

*Cristina Zogmaister (Università degli Studi di Milano-Bicocca)*

Transparency of materials is of paramount importance in science. In particular, when it comes to psychology, the specific instructions we provide and the wording of questions can influence the responses we get. Here I will present examples of how consistency in instructions and wording of materials can influence the degree of success in replicating empirical results, and seemingly minor deviations can lead to “non-replication” of the original study results. Next, I will present some data addressing the questions of how transparent researchers are in describing their materials, and how strongly scientific journals’ required and recommended guidelines enforce such transparency, with a particular emphasis on the field of social psychology. Finally I will discuss strategies for the improvement of materials transparency in scientific research.

## OPEN SCIENCE AND REPRODUCIBILITY IN CLINICAL PSYCHOLOGY AND PSYCHOTHERAPY RESEARCH

*Gian Mauro Manzoni (Facoltà di Psicologia, eCampus University)*

Replication in clinical psychology and psychotherapy research poses unique challenges that are difficult or even impossible to overcome. This gives reason to the paucity of replication studies that were done in the area over the last years and consequently to the small or almost null consideration that clinical psychology and psychotherapy research received in the mainstream narrative of the so-called “replication crisis”. However, even if the area was less affected, issues surrounding questionable research practices and open science are just as relevant as for the whole scientific field. The talk will discuss previous findings on the use of questionable research practices in clinical psychology research and will present new preliminary data on the knowledge and use of open science practices in a sample of Italian researchers in clinical psychology and psychotherapy who are AIP members.

## PREFERRED EVALUATION OF COGNITIVE AND NEUROPSYCHOLOGICAL STUDIES: THE PECANS STATEMENT FOR HUMAN STUDIES

*Cristiano Costa (Università degli Studi di Padova), Rachele Pezzetta (IRCCS Ospedale San Camillo), Massimo Grassi (Università degli Studi di Padova), Giorgia Cona (Università degli Studi di Padova), Enrico Toffalini (Università degli Studi di Padova), Cristina Scarpazza (Università degli Studi di Padova)*

Do papers provide all the information necessary to ensure the replicability of the study's protocol? Do authors clearly report the study design, the data analysis and accurately explain how they draw inferences from the results obtained? PECANS (Preferred Evaluation of Cognitive And Neuropsychological Studies) is a checklist that guides the planning, design, and reporting of experimental research, aiming to improve the transparency and the replicability of protocols and results. PECANS was created through a Delphi Method, by contacting and consulting international experts in psychology and neuroscience: it provides scientists with a checklist that helps to include all the crucial information needed to understand and reproduce a paper. PECANS can be a valuable tool to assist reviewers in evaluating the quality of reports; it can be used during submission, as researchers may attach the checklist to their manuscript or it may be used by journals to ensure that the paper includes all the relevant information. PECANS is dedicated to psychology and neuroscience but can be adapted to several empirical sciences.

# STUDENTS' PSYCHOLOGICAL SERVICES ADDRESS TO UNIVERSITY STUDENTS IN ITALY

*Proponente: Antonella Granieri (Dipartimento di Psicologia, Università degli Studi di Torino)*

In this changing world, university students have to face new challenges and develop new strategies in order to stay current with new demands, both for students living with their families of origin, and for non-resident students. Higher education can be stressful for many of them, who consistently report high levels of distress, and several studies highlighted an intensified demand for clinical interventions in recent years. Thus, the provision of psychological interventions among students' psychological services has become an important professional issue throughout the world, with major implications for campus health services and mental health policymaking more widely. Psychological services for students seem to be necessary to help them gain a better awareness of their mental health and a better knowledge of their personal resources needed to cope with critical events during the transition to adulthood. This possibility is even more relevant due to the mental health consequences of the 2019 coronavirus (COVID-19) pandemic, which triggered fears and anxieties worldwide and led to an increase in the frequency and severity of mental health problems.

## THE EFFECTIVENESS OF BRIEF PSYCHOLOGICAL COUNSELLING: THE EXPERIENCE OF THE UNIVERSITY OF TURIN

*Daniela Converso (Dipartimento di Psicologia, Università degli Studi di Torino), Filippo Rutto (Dipartimento di Psicologia, Università degli Studi di Torino), Gloria Guidetti (Università degli Studi G. d'Annunzio di Chieti)*

The high prevalence of psychological distress among the young adult population is an important public health issue to which university institutions responded with the activation of psychological counseling services. In 2019, has entered into an agreement with the Schools of Specialization in Health Psychology, Clinical Psychology and Neuropsychology of the same University, for the activation of a short-term psychological counselling (5 interviews). This contribution presents some data about the effectiveness of the intervention which involved 2255 students starting from January 2021 and the areas of greatest distress reported by users. The results regarding the efficacy of the treatment, measured by the OQ-45.2, highlight a significant decrease in the levels of psychological distress after the intervention delivered as well as the presence of high levels of satisfaction and perceived efficacy, the latter measured with an ad hoc scale, whose psychometrics properties will be presented. Results broaden the state of the art regarding the effectiveness of university counseling services in the Italian context, whose role of prevention and health promotion service in a non-clinical setting is of further relevance for the critical issues deriving from the COVID-19 pandemic.

## UNIFI STUDENTS' CLINICAL PSYCHOLOGICAL SERVICE: AN ACCOUNT OF THE FIRST YEAR OF ACTIVITY

*Barbara Giangrasso (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Silvia Casale (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Davide Dettore (Dipartimento di Scienze della Salute, Università degli Studi di Firenze)*

University students' mental health is a major global -public health challenge. Some studies have shown high rates of mental health problems among college students compared to the general population in the same age group. Consequently, psychological support is important also to help students cope with the academic requests. This led to the creation of the "Centro di Servizi di Ateneo in Counseling Psicologico, Psicoterapia e Psicologia Clinica" (CECOPS; University of Florence) in September 2021. The CECOPS offers psychological services for treatment-seeking college students, including psychological-clinical counseling, psychotherapy, coaching and health promotion interventions, learning difficulties and cognitive and neuropsychological assessment. In the first 6 months of activity, 330 requests were received. This contribution aims to highlight the counseling and psychotherapeutic interventions put in place by the staff belonging to the Service Center during the first year of its activity, by also presenting data concerning mental health problems prevalence, type of interventions and brief-term outcomes.

## NEVER ALONE AN EXPERIMENTAL MODEL OF PSYCHOLOGICAL COUNSELING FOR UNIVERSITY STUDENTS

*Paola Bastianoni (Università degli Studi di Ferrara)*

The model we are presenting is the psychological service “Never Alone” (Counseling and Psychological Listening Service) which was set up at the University of Ferrara immediately after the first lock down, in order to give an answer to the increase in psychological distress in University students. The service is characterized by certain quality standards considered essential: opening of the service throughout the year, methods of release in person and remotely, promptness of the response (within 48 hours of the request) and of taking charge (within 15 days of request), medium-short intervention model of a focal type, follow-up, choice of the language of the consultation, the consultation method and the sex of the consultant by the requesting student, periodic supervision of the consultants and the Service’s referent as guarantor of the Service itself to students. The service gave a prompt and effective response on the identified focus to 1200 students who, in the span of 21 months, made a request for consultation. The evaluation data of the students are being processed



## RESIDENZASCOLTA: A PSYCHOLOGICAL SERVICE ADDRESSED TO NON-RESIDENT UNIVERSITY STUDENTS

*Maria Domenica Sauta (Dipartimento di Psicologia, Università degli Studi di Torino), Antonella Granieri (Dipartimento di Psicologia, Università degli Studi di Torino), Isabella Giulia Franzoi (Dipartimento di Psicologia, Università degli Studi di Torino)*

The Post-Graduated School in Clinical Psychology of the University of Turin and the E.Di.S.U. Piemonte in 2014 started to collaborate on ResidenzaScolta, a free psychological service addressed to transfer, for the provision of psychological consultations and brief psychodynamic psychotherapies. Three hundred and seventy-four students (60.2% females) aged between 18 and 37 were consecutively enrolled. In 144 students were assessed alexithymia (TAS-20), depression (BDI-II), post-traumatic symptoms (IES-R), and suicide risk. 79 of them were tested before and after the intervention. Students showed mild depressive symptoms ( $M=19.33$ ;  $DS=11.38$ ) with a moderate to severe condition in the 41.8% of cases. The 17,4% was at risk for suicidal ideation. Post-traumatic symptoms mean value was severe ( $M=42.66$ ;  $DS= 14.21$ ). TAS-20 shows borderline or alexithymic levels in 56.9% of cases. The intervention seemed to reduce depressive symptoms, post traumatic symptoms and suicidal ideation, as well as difficulties in identifying feelings. Brief psychodynamic interventions seem capable of reducing these difficulties and helping students getting in touch with their feelings. Thus, it is important to improve the provision of psychotherapy interventions among University Psychological Services.

# SUPPORTING PARENTS THROUGH EFFECTIVE INTERVENTIONS: A PROTECTIVE FACTOR FOR DEVELOPMENT

*Proponenti: Lavinia Barone (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia), Alessandra Simonelli (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Parenting interventions enhance positive parenting skills and buffer risk factors for development. A substantial body of evidence highlights the importance to test interventions designed for populations with different characteristics and psychosocial risk factors. The symposium collects contributions aimed at presenting the effect of various parenting interventions that, through different modalities, target parents of offspring with different ages and coming from different backgrounds. The first contribution (Grumi et al.) introduces preliminary results of SPHERE, a family-centered telecare intervention aimed at supporting caregivers of young children with developmental disabilities. The second contribution (Cerniglia et al.) presents the results of a telemedicine intervention aimed at improving mother-child relationship and maternal wellbeing in parents of preschool children during the covid pandemic. The third contribution (Barone et al.) provides data inherent the eCONNECT, the online version of a widely adopted attachment-based parenting intervention aimed at reducing adolescents' attachment insecurity and behavioural problems. The fourth contribution (Porreca et al.) presents the results of a residential treatment for substance use on quality of mother-child relationships.

## ECONNECT: AN ONLINE ATTACHMENT-BASED INTERVENTION FOR PARENTS TO REDUCE ADOLESCENTS' ATTACHMENT INSECURITY AND BEHAVIOURAL PROBLEMS

*Ilaria Maria Antonietta Benzi (Università di Pavia), Lavinia Barone (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia), Jacopo Tracchegiani (Università di Pavia), Marlene Moretti (Simon Fraser University, Canada), Lisa Polidori (IRCCS Stella Maris), Laura Ruglioni (IRCCS Stella Maris, Pisa), Annarita Pilone (IRCCS Stella Maris)*

The study presents preliminary data on the effectiveness of the online version of the CONNECT program, an evidence-based attachment-focused parenting intervention to decrease adolescents' behavioural problems and improve parent-adolescent relationships (Barone et al., 2021). Participants were 24 parents (20 mothers; Mage = 49.33, SD = 5.32) of adolescents (Mage = 13.83 years, SD = 1.76, 45.8% girls). Parents rated their (mal)adaptive emotion regulation strategies and their adolescents' attachment insecurity and behavioural problems before participating in the eCONNECT program (t1), within two weeks after treatment (t2), and at 2-months follow-up (t3). Data highlight significant changes in parents' reports of adolescents' avoidant attachment ( $F(2) = 10.77, p < .01$ ) between t1 and t2 and t1 and t3, but no significant change in anxious attachment. Moreover, results show significant changes in parents' reports of adolescents' internalizing symptoms ( $F(2) = 10.77, p < .05$ ) between t1 and t2, and significant changes in externalizing symptoms ( $F(2) = 4.16, p < .05$ ) between t1 and t2, and t1 and t3. Finally, data show a significant decrease in parents' maladaptive emotion regulation strategies after treatment.

## MOTHERS' AND CHILDREN'S PSYCHOPATHOLOGICAL SYMPTOMS AND THE QUALITY OF THEIR INTERACTIONS DURING COVID-19 PANDEMIC: A PROPOSAL FOR TELEHEALTH INTERVENTION

*Silvia Cimino (Sapienza Università di Roma), Luca Cerniglia (Facoltà di Psicologia, Università telematica internazionale Uninettuno), Gessica D'angeli (Sapienza Università di Roma)*

During the COVID-19 pandemic children's psychopathological symptoms increased, even in the area of disordered feeding. Parental psychological problems also increased and the general quality of parent-child interactions worsened. The results of a telemedicine intervention aiming at improving exchanges in mother-child dyads have been investigated in this study. The SCL/90-R and the CBCL 1,5-5 were used to assess the feeding interactions of N=298 mothers and their three-year-old children using an observational tool administered via a web platform. Maternal and offspring psychopathological symptoms were measured using the SCL/90-R and the CBCL 1,5-5. A four-weeks online intervention was performed and it considerably increased the quality of mother-child feeding relations. Furthermore, mothers' psychopathological symptoms decreased, particularly in the subscales of interpersonal sensitivity, hostility, depression, anxiety, and obsessive-compulsivity. This study adds to the body of information on the impacts of the COVID-19 pandemic on the psychological health of parents and young children, presenting a method of intervention that had previously been successfully implemented but whose efficacy had not been tested during the pandemic.

## A FAMILY-CENTERED TELECARE INTERVENTION TO SUPPORT PARENTS OF CHILDREN WITH DEVELOPMENTAL DISABILITIES: THE SPHERE PROJECT

*Serena Grumi (IRCCS Fondazione Mondino), Shaghayegh Parsanejad (Università di Pavia)*

Infants with developmental disabilities (DDs) show emotional and interactive dysregulation impacting caregiving behavior. Early video-feedback interventions (VFIs) are effective in promoting sensitive parenting and infants' development. In the light of limited resources of the healthcare systems, telecare approaches may facilitate the delivery of VFIs. The ongoing Supporting Parenting at Home – Empowering Rehabilitation through Engagement (SPHERE) project is a RCT aimed to test the effectiveness of a family-centered telecare VFI (TVFI) with 0-18-month-old infants with DDs. Mothers assigned to the experimental arm receive six TVFI sessions. Mothers assigned to the control arm receive an informative booklet. Baseline and post-intervention assessment sessions include an online questionnaire and a 15-minute videotaped interaction. Preliminary results of the pilot study showed that participants welcomed this kind of intervention. Observatory data showed an improvement in maternal sensitivity and an increase in the use of teaching strategies. Infants spent more time oriented to the mothers and engaged in playing with them. The SPHERE project holds promises to test a new model of telecare for infants with DDs that can reduce healthcare inequalities in services access.

## SUPPORTING MOTHER-CHILD RELATIONSHIPS IN THE CONTEXT OF SUBSTANCE USE DISORDER THROUGH RESIDENTIAL PROGRAMS: DO COGNITIVE IMPAIRMENTS AND PSYCHOPATHOLOGY AFFECT TREATMENT OUTCOMES?

*Alessio Porreca (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Francesca De Palo (Comunità Casa Aurora - Comunità di Venezia scs), Nicoletta Capra (Comunità Casa Aurora - Comunità di Venezia scs), Pietro De Carli (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

Substance Use Disorder (SUD) is a risk condition for parenting and child development, and needs to be targeted through effective interventions. Residential programs are a commonly adopted strategy for this purpose but treatment outcomes are heterogeneous, stressing the need to identify factors that enhance/obstacle intervention effects. The study investigated the effect of residential treatment on quality of mother-child interactions in mothers with SUD, considering the role of SUD-related cognitive impairments and psychopathology. Sixty mothers with SUD (Age= 30.13±6.9yrs) and their children (Age = 17.17±23.6mths) in residential treatment were involved. Maternal cognitive impairments (ENB2) and psychopathology (SCL-90-R) were assessed at admission. Quality of mother-child interactions (EAS) was assessed from admission to the 15th month of treatment, during six time points. The results highlighted a significant role of cognitive impairments and psychopathology on treatment outcome. Specifically, a negative effect of maternal psychopathology and an interaction between time and cognitive functioning were found, with mothers presenting less cognitive impairments showing a significant improvement in relationship quality. Clinical implications of the results are presented.

# UNDERSTANDING PSYCHOLOGICAL CAUSES OF VACCINE HESITANCY AND REFUSAL DURING COVID-19 PANDEMIC: FROM EXPERIMENTAL DATA TO SOCIAL IMPLICATIONS

*Proponente: Luca Simione (Istituto di Scienze e Tecnologie della Cognizione, CNR)*

In the last two years, the COVID-19 pandemic has had a dramatic impact on both physical and mental health all around the world. The main instruments we got to contrast the pandemic were the containment measures, such as the lockdown, and the vaccination. Crucially, these instruments need strong compliance by the population to be effective, and they actually have not been accepted by all. In particular, vaccine hesitancy and refusal dramatically grew during the COVID-19 pandemic, as well as beliefs in conspiracy theories and mistrust of science. All these phenomena can have a long tail also in the next years, and then they should be carefully addressed by the research community to have more informed actions in the future to contrast them. Therefore, we propose this interdisciplinary symposium as a place to share and discuss recent scientific results, with the aim to increase collaborations and exchanges between social and experimental psychologists on such an important topic. With this symposium, we aimed to present new methods and experimental procedures to evaluate the psychological causes of vaccination intention, and highlight the social implications of our research.

## UNDERSTANDING VACCINATION FEAR IN THE ITALIAN POPULATION

*Mirko Duradoni (Università degli Studi di Firenze), Andrea Guazzini (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Marta Villen Veloso (Universidad de Córdoba, Spain)*

Vaccination has proven to be one of the most cost-efficient ways to avoid diseases, and its refusal has proven to be a significant threat to global health. Vaccine fear appears to be one of the main factors hindering vaccination campaigns. To validate in the Italian context the Vaccination Fear Scale (VFS-6) and explore its relationships with other sociodemographic and psychological variables, we recruited 1111 Italian participants (14.2% not vaccinated) by means of on-line anonymous voluntary census from 20 December 2021 to 10 January 2022. Confirmatory factor analysis supported a bifactorial model (cognitive and physical factors) also for the Italian version of the test, with very robust goodness of fit indicators, reliability, and internal consistency. We observed how vaccination fear was more related with fear of side effects, receiving harm from vaccination, and no benefit, while it was not correlated with fear of needles/injections. Moreover, our results suggested that vaccine fear is strongly and positively correlated with vaccine anxiety and hesitancy scores, and people who have high score of vaccination fear are less inclined to get vaccinated. Females on average appeared to be more fearful of vaccination, however, such differences appeared quite small.



## SO FAR, SO CLOSE: IDENTIFICATION WITH PROXIMAL AND DISTAL GROUPS AS PROMOTORS OF VACCINATION, CONTAINMENT MEASURES AND PRO-SOCIAL BEHAVIORS DURING THE COVID-19 PANDEMIC

*Anna Rita Graziani (Università degli Studi di Modena e Reggio Emilia), Silvia Moscatelli (Università di Bologna), Lucia Botindari (Johns Hopkins University SAIS Europe), Michela Menegatti (Università di Bologna), Stefano Ciaffoni (Università di Bologna)*

A robust body of research highlighted the fundamental role of social identification in dealing with emergencies and in predicting commitment in cooperative behavior. We report the results of a research carried out during April and June 2020 to verify whether the subjective sense of belonging to meaningful groups affected the way people were able to cope with the pandemic crisis. Our findings showed that different identifications (with family, friends, Italy, Europe, humanity) represent a benefit for the collectiveness by leading people to increase their intention of being vaccinated, to adhere to containment measures (keeping physical distancing, rubbing hands with alcohol-based sanitizers, wearing face mask), and to be involved in prosocial actions (helping the elderly in needs). Moreover, social identifications promote individuals' psychological well-being by reducing their negative emotions and the perception of the negative impact of the pandemic on their lives. The implication of different types of identification (proximal vs distant) on the intention to get vaccinated, to accept containment measures and to help others will be discussed.

## ASSESSING THE ROLE OF MISINFORMATION AND PSYCHOLOGICAL PREDICTORS ON THE INTENTION TO BE VACCINATED AGAINST COVID-19 IN AN ITALIAN SAMPLE

*Alessandro Santirocchi (Dipartimento di Psicologia, Sapienza Università di Roma), Pietro Spataro (Dipartimento di Economia, Università Mercatorum), Marco Costanzi (Dipartimento di Scienze Umane, Lumsa Università di Roma), Beatrice Cianfanelli (Dipartimento di Scienze Umane, Lumsa Università di Roma), Clelia Rossi-Arnaud (Dipartimento di Psicologia, Sapienza Università di Roma), Vincenzo Cestari (Dipartimento di Psicologia, Sapienza Università di Roma)*

COVID-19 vaccines are the most promising means of limiting the pandemic. The present study aims at determining the roles of several psychological variables in predicting vaccination intention in Italy. An online questionnaire was disseminated between 9 March and 9 May 2021. The sample included 971 participants. Results showed that most of the participants were willing to vaccinate. Acceptance rates were correlated with age and area of residence. Intention to be vaccinated was positively correlated with perceived risk, pro-sociality, fear of COVID-19, use of preventive behaviors, and trust in government, in science, and in medical professionals. Intention to be vaccinated was negatively associated with belief in misinformation. The degree of acceptance is likely to be a result of the campaign tailored to address people's negative attitudes towards vaccines. Trust in government and trust in science were among the strongest psychological predictors of vaccination intention. Fear of COVID-19, but not perceived risk, was associated with increased vaccine uptake, suggesting that the affective component of risk perception was more important than the cognitive component in predicting participants' behaviors. Belief in misinformation was associated with reduced vaccination intention.

## PRESENTING THE V-IRAP, A NEW EXPERIMENTAL TASK FOR ASSESSING IMPLICIT PSYCHOLOGICAL CAUSES OF VACCINE HESITANCY

*Luca Simione (Istituto di Scienze e Tecnologie della Cognizione, CNR), Monia Vagni (Università di Urbino), Daniela Pajardi (Dipartimento di Studi Umanistici, Università di Urbino)*

Vaccine hesitancy and refusal are ubiquitous phenomena that can reduce adherence to vaccination campaigns, with important implications for the population's health. A great number of studies were conducted to understand their psychological causes, and they usually rely on questionnaires or explicit measures of vaccination intention. Probing these constructs explicitly could be biased by defense mechanisms or social desirability. Therefore, we designed a new test called the Vaccine-IRAP or V-IRAP, which is a modified version of the original Implicit Relational Assessment Procedure. This implicit test distinguishes between positive and negative beliefs about vaccination. We enrolled 151 participants to test the V-IRAP in relation to the COVID-19 vaccination campaign. We evaluated participants also on their explicit evaluation of vaccines and actual vaccine acceptance. The results showed that V-IRAP has incremental validity over explicit measures in predicting vaccine acceptance. It also revealed that vaccine refusal was primarily driven by negative beliefs relative to vaccine-related risks. Overall, the results supported V-IRAP as a sensitive and reliable tool that can be further applied in studies on implicit attitudes toward vaccination in other scenarios.

## ALMOST LIKE US? PSYCHOLOGY AND ROBOTICS

*Proponenti: Antonella Marchetti (Università Cattolica del Sacro Cuore), Davide Massaro (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Interactions with robots in the life span are challenging researchers with new questions, some of which the Interdisciplinary Symposium aims to deal with. The first topic regards the role played by robots vs humans in communicative/non communicative contexts in conveying culturally shared knowledge. The second topic concerns the influence of mainly neglected social cues – i.e. social odors – in facilitating ecological interactions with robots. The third topic regards the observation of artistic artifacts as a specific type of human-robot shared experience where interesting differences between the impact of human vs robotic bystanders can be analyzed. The fourth topic involves the use of SAR in the elderly, where robots can support team interventions tailored on the specificities of the single cases considered. The studies presented adopt different methodologies - from behavioral to psychophysiological measures - to investigate a domain in continuous and rapid transformation.

## SHARED KNOWLEDGE IN HUMAN-ROBOT INTERACTION (HRI)

*Laura Miraglia (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Cinzia Di Dio (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Angelo Cangelosi (Department of Computer Science, University of Manchester, Manchester, UK), Shoji Itakura (Centre for Baby Science, Doshisha University, Japan), Takayuki Kanda (Department of Computer Science, Kyoto University, Japan - Advanced Telecommunications Research Institute International, IRC/HIL, Keihanna Science City, Japan), Hiroshi Ishiguro (Advanced Telecommunications Research Institute International, IRC/HIL, Keihanna Science City, Japan - Department of Adaptive Machine System, Osaka University, Japan - Department of Systems Innovation, Osaka University, Japan), Peter Fonagy (Research Department of Clinical, Educational and Health Psychology, University College London, UK), Davide Massaro (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Antonella Marchetti (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Natural Pedagogy Theory posits that in an ostensive context, information conveys the emotional valence of an object that is culturally shared and generalizable (shared knowledge); while, in a non-communicative context, information is interpreted as a subjective disposition. We hypothesized that this genericity bias may be a feature of human communication at all ages. Also, we questioned the effects of robotic ostensive cues. 193 adults were split into human and robot conditions and observed object-directed emotions in communicative and non-communicative contexts. Questionnaires further assessed attachment style and mentalization ability. The results showed that 1) Natural Pedagogy theory applies to humans across the lifespan; 2) Shared knowledge depends on the contexts (ostensive vs non-communicative) and who is sharing the information (human or robot); 3) while robot's ostensive cues triggered participants' attention, in their absence, participants did not assign the robot a communicative intention due to a difficulty in reading the robot's mind, which is opaque. In conclusion, shared knowledge assumption may be an inherent part of human communication, and robotic ostensive cues may ease human-robot interaction (HRI) which also depends on the human's attachment style.

## COMMUNICATION MEDIUMS, HUMAN-ROBOT INTERACTION AND THE MISSING EVOLUTIONARY SOCIAL ODOR

*Sara Invitto (Università del Salento), Angelo Cangelosi (Department of Computer Science, University of Manchester, Manchester, UK)*

Human Robot Interaction (HRI) uses models of augmented perception, AI and a human-like morphic aspect. This led us to understand that the greater the similarity with humans, the more 'ecological' will be the HRI. In these augmented sensory integrations, the olfactory interaction (i.e. social odor SO), seems to be missing, which, instead, is fundamental in the relational and evolutionary process. Starting from this basis will be described two studies carried out by integrating SO (i.e., putative pheromones Androsten and Estratetraenol) and a control odor (i.e., Vaseline oil) in communication mediums (CM) and in HRI. These studies propose a model that analyzes the relationship connected to gender-related differences, evaluated both through behavioral data (i.e., sense of co-presence and trust) and through electrophysiological responses (i.e., transfer entropy analysis in EEG). Main results show how the integration of the SO aspect can modulate the response of the interaction with the CM and how this response is not conscious, that is directly related to smell, but is mediated by an implicit pattern elicited by the putative pheromones. Future applications of HRI will not be able to scotomize the olfactory aspect, that, more than other senses, dominates the relational sphere.

## DOES THE PRESENCE OF A ROBOTIC VERSUS HUMAN BYSTANDER INFLUENCE AN OBSERVER'S AESTHETIC EXPERIENCE? AN EXPERIMENTAL STUDY

*Sabrina Bartolotta (Università Cattolica del Sacro Cuore), Marta Pizzolante (Università Cattolica del Sacro Cuore), Alice Chirico (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Maurizio Mauri (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Andrea Gaggioli (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Andrea Monaldini (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Recent work has called for a shift in focus from 'human-robot interaction' to 'human-robot shared experience', suggesting that co-adaptation and intersubjectivity should become more central concerns in the design of social robots (Gaggioli et al., 2021). Here, we aimed at investigating whether, and to which extent, an observer's aesthetic experience can be influenced by the presence of a robotic versus human bystander. Drawing on previous theoretical development, we expect that the co-presence of a bystander would affect the experience of the observer, according to the nature (human or artificial) of the bystander. Two social cues (i.e., gaze and proximity) were manipulated to create three different conditions (i.e., human-robot shared experience, human-human shared experience, and observer alone). Self-report measures, psychophysiological correlates and facial expression were assessed. Self-report measures included: a state measure of affect (Terraciano et al., 2003), aesthetic emotions (Schindler et al., 2017), flow (Martin & Jackson, 2008), and awe (Chirico et al., 2017). Secondary measures included: a dispositional measure of awe, negative attitudes towards robots and attribution of mental states to robots (Manzi et al., 2021) and social presence (Fiore et al., 2013).

## AGING OF THE POPULATION AND SOCIALLY ASSISTIVE ROBOTICS: THE IMPORTANCE OF ROBOTIC SUPPORT IN PSYCHOLOGICAL INTERVENTION

*Daniela Conti (Dipartimento di Scienze Umanistiche, Università di Catania), Alessandro Di Nuovo (Sheffield Hallam University, UK), Santo Di Nuovo (Dipartimento di Scienze della Formazione, Università di Catania)*

In recent years, studies on Human-Robot Interaction have focused on Socially Assistive Robotics (SAR) to support older people in the home environment, both helping them to live longer and independently at home and to promote cognitive and/or motor activity rehabilitation. SAR can assist the user via an interactive-social environment, in which the humanoid robot plays the role of trainer while simultaneously monitoring the progress of cognitive and/or motor intervention. Novel SAR technologies are being introduced to favor the active involvement of users and manage the human-robot interaction semi-autonomously. In this context, the therapist could create and monitor a programmed script, which can be adapted to the needs and requirements of the participant. In conclusion, a humanoid robot can represent a therapeutic support for teamwork, but must not replace the human professional. In a vulnerable population, such as older people, the benefits of SAR should be balanced against the ethical costs of the planned intervention for each participant.



## BROADENING THE HORIZONS: PARENTAL AND SOCIAL GENERATIVITY

*Proponenti: Laura Ferrari (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Sonia Ranieri (Università Cattolica del Sacro Cuore)*

Family can be considered as a system in a state of interdependence with the community. This is particularly evident in the case of adoptive and foster families, that take place in the intersection between the parental and social generativity. The present symposium takes a closer look at the role of adoptive and foster families within communities, taking into account the reciprocal family and social interaction. Assuming a developmental perspective, Cassibba and colleagues explores the interplay between the contextual pre-adoptive risk conditions and adoptive family factors, as perceived by adoptive parents, in influencing school-aged adoptees' outcomes. From a clinical theoretical framework, Novara explore the general population's attitudes towards adoption, as well as the stereotypes that emerge in the society toward adoptive families. Assuming a social perspective, Lopez and colleagues focus on the vision of operators about the decision-making process of foster parents. Finally, Ferrari and colleagues describe adoptive parents' adjustment to the challenges posed by the COVID-19 pandemic compared with non-adoptive parents. The dialogue among these different contributions and disciplinary perspectives will allow to deeper highlight future paths of research and intervention.

## SCHOOL-AGED ADOPTEES' OUTCOMES IN PARENTS' VIEWS: PREDICTOR AND MODERATOR FACTORS

*Pasquale Musso (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Caterina Balenzano (Dipartimento di Scienze Politiche, Università degli Studi di Bari 'Aldo Moro'), Rosalinda Cassibba (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Giuseppe Moro (Dipartimento di Scienze Politiche, Università degli Studi di Bari 'Aldo Moro')*

Adopted children have often learning difficulties leading to lower educational outcomes (Anderman et al., 2021), and social and adjustment difficulties (Barbosa-Ducharme, 2021; Paniagua et al., 2020). However, research exploring predictor factors is scant (Koenka et al., 2020). This study investigated the predictive role of preadoptive adversity and parenting on different adoptees' outcomes (learning, school performance, social skills and adjustment), considering "length of adoption" as a moderator, and age at adoption and parent's and child's gender as control variables. Sixty parents of 75 school-aged adopted children (64% male; age mean = 10.88) participated in an ad hoc survey. Results from four moderated regression models suggest that positive parenting is positively linked with adoptees' adjustment and social skills, but it has no association with learning and school performance. Preadoptive adversity has a negative link with positive adjustment, learning abilities and school performance; for adjustment and learning, this association was moderated by length of adoption. A similar moderating pattern was evidenced for social skills, but no direct association with preadoptive adversity. Findings are discussed in light of the most recent literature.

## THE ROLE OF EMOTIONS IN THE CONSTRUCTION OF ADOPTIVE FAMILY STEREOTYPICAL REPRESENTATIONS IN AN ITALIAN SAMPLE

*Cinzia Novara (Università degli Studi di Palermo)*

The adoptive families reporting to be encumbered by society's stereotypes and are stigmatized by the stereotypes they are identified with. The ICONA research, promoted by ItaliAAdozioni, analyzed if the reduced number of adoptions could be also the result of social stereotypical constructions of Italians toward these families. Aim of this paper is to investigate stereotypical representations, basing on data coming from a survey submitted to a representative sample of Italian households. We look at the statistical relations among subjective characteristics, stereotypical representation and emotional reactions towards adoption (positive or negative) with respect to family, parent and child. ANOVA results show that variables bring out differences on the way of representing adoptive families. Furthermore, from the analysis of the linear regressions it emerges that negative emotions towards an adoptive generativity project predict a more stereotypical representation of the adoptive family ( $\beta = -.657$ ,  $p = .001$ ). In line with these conclusions, the ItaliaAdozioni association created a series of video interviews and other video products to support the choice to adopt through an affective communication able to arrive to younger generations or to social contexts more at prejudicial risk.

## EXPERTS' VALIDATION OF A MODEL OF FOSTER PARENTS' DECISION-MAKING

*Giulia Lopez (Università Cattolica del Sacro Cuore), Ariela Francesca Pagani (Dipartimento di Studi Umanistici, Università di Urbino), Raffaella Iafrate (Università Cattolica del Sacro Cuore)*

The present study describes the validation process of the theoretical model of Acting Generativity – developed in a Grounded Theory study about the decision-making process of foster parents – through the involvement of operators expert on foster care. The validation process included: the “triangulation” step in which we collected the vision of operators about the decision-making process of foster families; the “consensualization” step in which, starting from a detail description of the Acting Generativity model, a conversation was stimulated to collect suggestion and possible improvements; finally, the “application relapses” step in which the perspective of the operators about the possible operational applications of the model in their professional practice was investigated. The methodology strategy was the group conversation. Twelve operators, divided into two groups, were involved. The group conversation was audio-recorded and transcribed. The group conversation allowed a more complete explanation of the decision-making process. The validation of the model allowed to discuss its ability to represents the investigated reality and to insert modifications improving the interpretation of the phenomenon and its applicability on the operational level.

## BEING AN ADOPTIVE MOTHER DURING THE PANDEMIC: UNIQUE RISKS AND RESOURCES

*Laura Ferrari (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Elena Canzi (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Daniela Barni (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Sonia Ranieri (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Francesca Vittoria Danioni (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Giuliana Lafico (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Rosa Rosnati (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

There is a lack of research in the literature regarding adoptive parents' adjustment to the challenges posed by the Covid-19 pandemic. The current study was aimed at evaluating differences between adoptive and non-adoptive mothers, considering both risks (i.e., COVID-19 stress in terms of fear and traumatic stress symptoms related to the virus) and resources at individual (i.e., sense of coherence), couple (i.e., partner's support), parent-child (i.e., parent-child relationship satisfaction), and social (i.e., friends' support) level. A discriminant analysis was used to predict which variables discriminate more effectively between the two groups. Our sample consisted of 445 mothers (40.9% adoptive mothers), who participated in an online survey between May 2021 and October 2021. Findings showed that COVID-19 traumatic stress symptoms, parent-child relationship satisfaction, and sense of coherence contributed most in distinguishing between the groups. Specifically, adoptive mothers reported a less traumatic reaction to the experiences related to the virus and a greater ability to perceive stressors as under control and predictable. However, they reported lower parent-child satisfaction. Results will be discussed in relation to practical implications.

# DEVELOPMENTAL RISK AND THE ADOLESCENT PASSAGE AT THE TIMES OF THE COVID PANDEMICS

*Proponente: Riccardo Williams (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Epidemiological research has highlighted the significant increases in the adolescent population of phenomena such as depression and anxiety, social withdrawal, self-harm and suicidality, bullysm and violence, sexual promiscuity and harassment, internet addiction and substance abuse since the onset of the SARS-COVID-19 pandemics. Such phenomena, along with the onset of the most relevant psychiatric syndromes, are otherwise considered potential maladaptive outcomes connected to the adolescent passage. Although recent data point to the correlation between the increase in such risk behaviors, psychopathological outcomes and the consequences of the pandemics, a more accurate analysis is suggested that should takes into account the possible impact of the psycho-social factors related on the basic issues and challenges posed by the adolescent development as well as on the pre-existing level of maturation and organization of personality and mental functioning. This panel proposes a dialogue between the developmental, psychosocial and clinical-dynamic perspectives in understanding the intertwine of such factors in four specific areas of developmental risk

## ONLINE RISKY BEHAVIORS AND PERSONALITY: A CROSS-COUNTRY INVESTIGATION ON THE INFLUENCE OF CALLOUS-UNEMOTIONAL TRAITS ON AGGRAVATED SEXTING

*Antonio Chirumbolo (Sapienza Università di Roma), Mara Morelli (Sapienza Università di Roma)*

Sexting is a new risky behavior that is increasingly common among young people. The present study investigated the role of callous-unemotional traits, the affective dimension of psychopathy, in three kinds of aggravated sexting (i.e., non-consensual sexting of partner, of known people, and of unknown people) across 11 countries. An online survey was administered to 6083 adolescents and young adults ( $M = 20.35$ ). As participants were nested in different countries, we run a generalized mixed model for the three aggravated sexting behaviors in which country was the grouping variable. Demographical variable (age and biological sex), the three callous-unemotional traits (i.e., callousness, uncaring, unemotional), and their interactions were included as fixed effects. Moreover, the model comprised a fixed intercept, and one random intercept for each of the country. Consistently for all the three considered dimensions of aggravated sexting across countries, results pointed out that boys and younger participants are more likely to engage in aggravated sexting. Furthermore, while callousness and uncaring had a positive effect, the unemotional trait showed a negative effect. These findings could help to identify personality profile of young people who share sexts with harmful intentions.

## ADMISSIONS TO GENERAL HOSPITAL PSYCHIATRIC WARDS IN ITALY DURING THE COVID-19 PANDEMIC: AN EPIDEMIOLOGICAL STUDY ON A CATCHMENT AREA OF 3.71 MILLION OF INHABITANTS

*Tommaso Boldrini (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Arianna Schiano Lomoriello (DTU Compute, Technical University of Denmark, Denmark), Giuseppe Di Cicilia (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Osmano Oasi (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Paolo Girardi (Dipartimento di Scienze Ambientali, Informatica e Statistica, Università Ca' Foscari Venezia)*

To evaluate differences in psychiatric hospitalizations in Italy during and after the lockdown due to COVID-19 pandemic, compared to the same periods in 2018 and 2019. Anonymized data on psychiatric admissions ( $n = 4550$ ) from 12 general hospital psychiatric wards in different Italian regions (catchment area = 3.71 millions of inhabitants) were analyzed. Using a mixed-effects Poisson regression model, we compared admission characteristics across three periods: (a) March 1–June 30, 2018 and 2019; (b) March 1–April 30, 2020 (i.e., lockdown); and (c) May 1–June 30, 2020 (i. e., post-lockdown). During the COVID-19 lockdown, there was a 41% reduction in psychiatric admissions in the enrolled GHPWs with respect to the 2018 and 2019 control period. Conversely, admission rates in the post-lockdown period were similar to those observed in the control period. Long-stay admissions ( $>14$  days) increased by 63% during the lockdown and decreased by 39% thereafter. A significant 35% increase in patients reporting suicidal ideation was observed in the post-lockdown period, compared to the rate observed in the 2018 and 2019 control period (IRR = 1.35; 95% CI: 1.01–1.79). Increased admission of patients reporting suicidal ideation in the post-lockdown period merits special attention.



## AT-DISTANCE LEARNING DURING COVID-19 PANDEMIC AND SOCIAL ANXIETY IN ADOLESCENTS: THE INDIRECT EFFECTS OF RESILIENCE AND PSYCHOLOGICAL DISTRESS

*Antonia Lonigro (Dipartimento di Scienze della Formazione, Università degli Studi Roma Tre), Dora Bianchi (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Maria Rosaria Nappa (Dipartimento di Giurisprudenza, Economia e Scienze Umane, Università di Reggio Calabria), Daniele Di Tata (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Sara Pompili (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Fiorenzo Laghi (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma)*

This study hypothesized that at-distance learning due to COVID-19 pandemic (endured until June 2021 in Italian schools) indirectly affected adolescents' social anxiety by increasing psychological distress and reducing perceived resilience. In November 2021, 280 adolescents ( $M_{age} = 16.96$ ,  $SD = 0.90$ ) were recruited at school. Students retrospectively reported their at-distance learning experiences in the last year (i.e., number of days of online lessons; negative perceived impact of online lessons on relationships and learning). They also self-rated their resilience, psychological distress, and social anxiety on three dimensions (i.e., fear of negative evaluations, FNE; avoidance of new situations, NEW; general avoidance, GEN). Multiple mediation models were tested. FNE was positively predicted by the days of online lessons via the indirect effect of psychological distress,  $\beta = .10$ , IC [.0521; .1544]. NEW and GEN were positively predicted by the days of online lessons via psychological distress, NEW:  $\beta = .09$ , IC [.0425; .1387]; GEN:  $\beta = .08$ , IC [.0435; .1324]; and by the negative perceived impact of online lessons via resilience, NEW:  $\beta = .02$ , IC [.0003; .0429]; GEN:  $\beta = .02$ , IC [.0014; .0476]. Our findings may have implications for prevention and clinical practice.

## PECULIAR MOTIVATIONS IN THE ADOLESCENT SUICIDAL PROCESS AT THE TIMES OF THE PANDEMICS

*Riccardo Williams (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Marta Moselli (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Annalisa Tanzilli (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

A reflection is proposed upon the sensitive increase in the adolescent population of the NSSI and suicidal conducts since the start of the pandemics. General epidemiological evidence will be discussed along with the data of a pilot study on the suicidal motivations of a sample of adolescents referred for suicidal risk. Methods: 25 girls and Boys aged between 13 and 28 were administered the CSSRS, the Motivational Interview for Suicide and the PID. Results: suicidal ideation and attempts are significantly associated to motivations of psychache and low belongingness. No specific profiles of domains and traits corresponding to personality pathology emerge in the sample. Discussion: Motivations sustaining the suicidal process in this sample of adolescents are different from the ones found in other samples of suicidal adolescents and seem to reflect widespread feelings of loneliness, helplessness and hopelessness characterizing adolescent population from the onset of the pandemics.

# INSIGHTS ON THE EMERGENCE AND DEVELOPMENT OF NUMBER-HAND ASSOCIATIONS

*Proponente: Mariagrazia Ranzini (Università degli Studi di Padova)*

Hand actions concur in number processing during many contexts of everyday life, such as counting, calculating, or communicating numbers. How does the number-hand interplay emerge and develop? The aim of this symposium is to trace the origins and the evolution of this association during lifespan by providing an overview of recent findings. Specifically, it will be described how infants show sensitivity for congruency between number-hand couplings, i.e., small/large numerosity associated with large/small hand opening, respectively. Moreover, the evolution of associations between number magnitude and hand posture will be discussed in light of recent findings indicating that children match large numbers with open hand earlier than small numbers with closed hand. Recent data on the relation between finger configurations and number representations will be then described, showing how number and hand action interact at a semantic level in adulthood. Finally, an overview of the neural substrate of number-action interactions will be presented, highlighting the existence of common and distinct brain regions involved in number processing and in hand actions. The role of neuroanatomical constraints and sensorimotor experience in number-hand association will be discussed.

## THE EARLY LINK BETWEEN NUMBER-ACTION PROCESSING IN PREVERBAL INFANTS

*Gisella Decarli (Integrative Neuroscience and Cognition Center, Université Paris Cité, CNRS, France),  
Maria Dolores de Hevia (Integrative Neuroscience and Cognition Center, CNRS, Université Paris Cité,  
France)*

Human newborns can represent and manipulate numerosities from the first hours of life. The ability to perceive quantities is found to increase in acuity during the lifespan and to be located in the parietal cortex. Interestingly, some studies have demonstrated that this area is also involved in several spatial and motor tasks, paving the way to new theoretical perspectives on the association between numbers and other cognitive domains. For example, the number-space association has been highlighted in children, infants and even in newborns. Moreover, a link between numbers and hand action has been reported in many studies, demonstrating the close and reciprocal influence of these abilities on each other. However, in the literature there are no studies that have investigated this link in infancy yet. Here, for the first time, we assessed the origins of the number-action interaction in preverbal infants using different techniques. We found evidence for a close relation between number and action, suggesting the existence of a link between these domains that is already functional at earliest stages of development.

## NUMBER SEMANTICS IS INFLUENCED BY SENSORIMOTOR MECHANISMS BY EARLY CHILDHOOD

*Elena Nava (Università degli Studi di Milano-Bicocca), Maria Dolores De Hevia (Integrative Neuroscience and Cognition Center, CNRS, Université Paris Cité, France)*

Recent findings in behavioural and neurophysiological studies converge in suggesting that the motor system is not exclusively dedicated to the control of action but may contribute to conceptual processes, such as number representation. Here we investigated the development of the intuitive relationship between number and action in children aged between 3 and 8 years of age and a group of adults. In Experiment 1, images of two hands (open or closed) and images of two numerical quantities (small or large) were presented, and participants had to choose which of the two quantities matched the presented hand. Results revealed that while adults spontaneously matched the open hand with the larger quantity and the closed hand with the smaller quantity in a systematic way, the youngest group of children only matched the open hand with the larger magnitude, due to a general preference for larger numbers. In Experiment 2, we used short videoclips to better convey the action of the hand opening and closing: we corroborated findings of Experiment 1 in younger children and found that the intuitive match between the close hand and the smaller magnitude only emerges by age 8.

## NUMBERS IN MIND AND FINGERS IN ACTION: A CROSS-NOTATION PRIMING STUDY IN VIRTUAL REALITY

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The crucial role of fingers in numerical cognition is inherent in the etymology of the word “digit” that refers both to finger and Arabic number. The use of fingers helps with the acquisition of numerical concepts, and it remains present in adults. It has been shown that finger configurations and number representations interact through semantic mechanisms. So far, research has focused unidirectionally on the priming effect exerted by finger configurations on numbers. Aim of the present study is to unfold the finger-digit functional link in the opposite direction, by exploring the priming effect exerted by Arabic digits on finger configurations that are visually conveyed and actively imitated. A cross-notation priming experiment was conducted in virtual reality with the involvement of the Leap Motion™ sensor, a hand motion tracker able to determine the user’s finger configurations through optical sensors alongside an internal model of the human hand. The results document signatures of embodied numerical cognition in the domain of motor planning and execution of numerical finger configurations. Our study represents a fruitful methodological approach to understand how visual and motor aspects of finger counting contribute to the development of embodied numerical cognition.

## BRAIN AREAS INVOLVED IN HAND ACTION AND SYMBOLIC NUMBER PROCESSING

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Behavioural studies have shown interactions between number processing and the planning and execution of hand actions. For instance, closing and opening finger movements, as well as leftward and rightward actions, are consistently associated with small and large numbers, respectively. However, where number and hand action interact in the brain is still unclear. We provide here an overview of current data indicating common and specific brain areas involved in symbolic number processing and hand actions. We first describe studies which have directly investigated number and hand-related processing at the brain level. Second, we report the results of our recent meta-analysis of neuroimaging studies on symbolic number comparison, hand reach and grasp, where we showed a shared frontoparietal brain network, together with specific number-related areas within the left superior parietal gyrus, the right supramarginal gyrus, and the inferior frontal gyrus. Finally, we discuss the specificity of these brain regions considering the current literature on the development of symbolic number processing. Taken together, these findings indicate that mental representations of symbolic number are built upon neuroanatomical constraints and sensorimotor experience during lifespan.

# INTERACTION IN THE NEW TECHNOLOGY ERA: WHEN THE RESOURCE MAY BECOME A PROBLEM

*Proponente: Luca Milani (Università Cattolica del Sacro Cuore)*

Media technology progress deeply modified individuals' communication habits and has impacted the understanding of psychological processes from different points of view. The present symposium aims to deepen the knowledge of potential risk and protective factors regarding the interaction with new technologies in different age groups. Communication 1, by Fioravanti and colleagues, will address the risk of Smartphone Addiction in a sample of young adults, in the light of the intertwine between desire thinking, craving and use of the technology. Communication 2, by Ruggieri and colleagues, will focus on Social Networking and the social comparison process: two studies will highlight protective and risk factors about the effects of social comparison on this side. Communication 3, by Curcio and colleagues, will address the theme of the serious games and will highlight potential positive cognitive outcomes of interacting with modern videogames, focusing on the effects on expert and non-expert gamers. Finally, Communication 4, by Cucci and colleagues, will be dealing with the theme of Photo Investment (time and emotional resources spent in choosing photos to upload on SNS), and the relationship of this variable with narcissism and body satisfaction in adolescents and young adults.



## DESIRE THINKING AND CRAVING AS PREDICTORS OF PROBLEMATIC SMARTPHONE USE

*Giulia Fioravanti (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Sara Bocci Benucci (Dipartimento di Scienze della Salute, Università degli Studi di Firenze)*

According to the Elaborated Intrusion Theory, the escalation and persistency of craving depend on the activation of a voluntary cognitive process orienting to prefigure images, information and memories about positive target-related experience termed Desire Thinking (DT). DT was found to be associated with different addictive behaviors. The current study investigated the role of DT's imaginal prefiguration (IP) and verbal preservation (VP) components and craving in predicting Problematic Smartphone Use (PSU). A sample of 646 participants (mean age=27.57±9.64; %Females=74.8) completed the following self-reports: Boredom Proneness Scale-Short Form, Depression Anxiety and Stress Scale, Desire Thinking Questionnaire, Mobile Phone Craving Scale and Smartphone Addiction Scale-Short Version. The path analysis showed that the hypothesized model produced a good fit to the data [ $\chi^2 = 4.906$ ,  $df = 4$ ,  $p = .02$ ; RMSEA [90%CI] = .02[.00-.06]; CFI = .99; SRMR = .01] and accounted for 60% of PSU variance. Psychological distress and boredom proneness (independent variables) were associated with PSU through (i) the serial mediation of IP and VP (ii) the serial mediation of IP and craving. These findings provide initial support for the conceptualization of desire thinking as a construct associated with PSU.

## THE ROLE OF SOCIAL COMPARISON AS A PROTECTIVE AND RISK FACTOR IN THE INTERACTIONS OF VIRTUAL GROUPS

*Stefano Ruggieri (Università degli Studi di Enna 'Kore')*

Much of users' daily time SNSs is spent looking at the stream of information updated by members of our social networks. Posts by friends, relatives, acquaintances and people we have never met appear on our SNS timelines. Being constantly exposed to the successes, goals and achievements of others has important psychological consequences on what we are. Social comparison is an inevitable element of what occurs when we examine our social media and compare our results with those of our social "friends". In this sense, SNSs provide a fertile ground for social comparisons, as information about similar or different comparison targets is clearly and quickly available. Two studies are presented in which positive and negative aspects of social comparison emerge within social media. In the first, conducted before the post-COVID lockdown transition time, we observed how high levels of social comparison produced beneficial effects on the reduction of psychological distress (anxiety, stress, loneliness and life satisfaction). In the second study, the relationship between online social comparison and negative emotions (i.e., malicious envy), avoidance behaviour and ill-being was observed. The results of these studies will be described within a unitary theoretical framework.

## VIDEOGAMES AND COGNITIVE ENHANCEMENT: LESSONS FROM EXPERIENCED GAMERS

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It has been shown that some action videogames (VG) can improve several cognitive functions. Very few research has been done on the weight of videogaming frequency per se in enhancing cognitive performance. In this study we aimed to compare the cognitive performance of two groups of university students selected on their previous experience with videogaming, independently by the specific genre. We selected two groups of participants, the Experienced (EGs; playing more than 35 hours/week) and Casual Gamers (CGs; playing less than 3 hours/week) and compared their performance to a computer-based battery of cognitive functions including vigilance, attention switching, decision making, inhibitory control. Results indicated an improvement of basic attentional abilities and vigilance level indicated by a significant increase in the EGs group. The same group also showed a more efficient decision making, particularly in risky decisions. Taken together these results show that a continuous and constant exposure to VG, independently by the specific genre played, can favour a cognitive enhancement, opening to possible future research and application to different clinical populations with cognitive impairment.

## INVESTIGATING PHOTO INVESTMENT IN ADOLESCENCE AND YOUNG ADULTHOOD

*Gaia Cucci (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Emanuela Confalonieri (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Daniela Villani (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Photo investment (PI) reflects people effort and investment in choosing photos of themselves to share and their concern about such posts. Literature showed the association among PI, individual characteristics, body esteem, gender and age. The study aimed at investigating: 1) gender and age differences on PI, self-esteem, narcissism and body esteem (i.e. appearance, attribution, weight); 2) the role of self-esteem, narcissism and body esteem in explaining PI, distinguishing for gender and age. Participants were 238 adolescents (MAge=16.32) and 269 young adults (MAge=23.73), who completed an online survey. Independent samples t-tests showed several age differences in the male subsample. In the male subsample, appearance and narcissism explained adolescent PI ( $F= 9.578$   $p<.001$ ;  $R^2=19\%$ ), and appearance and attribution young adult PI ( $F= 20.428$ ,  $p<.001$ ;  $R^2=22\%$ ). In the female subsample, appearance explained PI for both adolescents ( $F= 6.418$ ,  $p=.013$ ;  $R^2=6\%$ ) and young adults ( $F= 26.015$ ,  $p<.001$ ;  $R^2=18\%$ ). Findings suggest that adolescents and young adults, both males and females, with a good general feeling about their appearance are less concerned about their photo posting. Furthermore, the perception of other's evaluation about one's body influences young adult male PI.

## INTERNET-USE DISORDERS: SOCIAL CHALLENGES, AND RESEARCH PERSPECTIVES

*Proponente: Rocco Servidio (Dipartimento di Culture, Educazione e Società, Università della Calabria)*

Despite numerous advantages, evidence indicating some dysfunctional qualities of Internet use has stimulated hypotheses regarding the possibility that frequent use might hide some behavioural addiction. The symposium aims to share scientific results and promote the discussion to better understand these emerging phenomena. It includes four contributions aimed at contributing to the ongoing debate. The first contribution underlines how primary school children with low friendliness, low conscientiousness, and socialization problems tend to use smartphones as a tool to handle emotions. The second contribution suggests that the relationship between problematic social media use and psychological distress is mainly driven by trait-like differences and not by state-like individual changes over time. During the COVID-19, there was an increased risk of technology-related addiction. The evidence related to this phenomenon is confirmed by the results of the third contribution, which also underlines the protective role of interpersonal relationships. The last contribution, whose aim was to explore the association between self-concept clarity and Internet gaming disorder (IGD), indicates that self-concept clarity was negatively associated with IGD, and avoidance mediated this relationship.

## CHARACTERISTICS OF PERSONALITY WHICH FAVOR THE DEPENDENCE RISK ON SMARTPHONES IN CHILDREN?

*Stella Conte (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Carla Ghiani (Università di Cagliari), Eraldo Nicotra (Università di Cagliari), Roberto Truzoli (Università degli Studi di Milano Statale)*

This research aims to verify the relationship between smartphone dependence risk and personality traits in primary school children. A self-assessment questionnaire (16 item) SARCQ (Conte et al. 2022) was administered in order to assess the Smartphone Dependence risk in a sample of children. The test measures smartphone dependence risk according to two aspects: smartphone as a tool to handle emotions (“I’m Not Afraid Of You”: INAOY) and the smartphone as a transactional object (“Linus Blanket”: LB). These dependence risk factors have been related to some personality traits. The Big Five Children Test (BFC) was administered in order to measure some personality traits in children. Results show that the use of Smartphone as a “mean to handle emotions” or as a “transitional object” affects children with low Friendliness, low Conscientiousness and with socialization problems. They may prefer a relationship mediated through the smartphone to the “face-to-face relationship”.

## PROBLEMATIC SOCIAL MEDIA USE AND PSYCHOLOGICAL DISTRESS UNDER THE COVID-19 PANDEMIC: A LONGITUDINAL THREE-WAVE PANEL STUDY

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Currently, findings on the relationship between problematic social media use (PSMU) and psychological distress are contradictory and ambiguous. While some studies indicated that the use of social media might represent a promoting factor for people's well-being, other research evidenced a negative impact of PSMU on mental health. Moreover, most evidence from cross-sectional studies failed to address the question of whether the use of social media causes psychological distress or vice versa. To fill this gap, this contribution aims to explore the reciprocal relationships between PSMU and psychological distress through a three-wave panel study. 3,912 participants were surveyed during the COVID-19 pandemic for psychological distress (DASS-21) and PSMU (BSMAS). Random-Intercept Cross-Lagged Panel Models evidenced a between-person level correlation between higher PSMU and heightened levels of psychological distress across the three waves. However, no cross-lagged associations were found on a within-person level between changes in PSMU and subsequent changes in distress and vice versa. Findings suggest that the relationship between PSMU and psychological distress is mainly driven by trait-like differences and not by state-like individual changes over time.

## GAMING ADDICTION AMONG ADOLESCENTS IN THE COVID-19 ERA: RISK AND PROTECTIVE FACTORS

*Luca Milani (Università Cattolica del Sacro Cuore), Gloriana Rangone (CISMAI), Daniela Invernizzi (Unicef), Gabriella Scaduto (Lombardy Regional Board of Psychologists)*

COVID-19 pandemic has significantly affected the health of adolescents, and there is an increasing amount of evidence that the risk of technology-related addiction seems to have amplified. The present research investigated potential adaptation problems of Italian adolescents, focusing on social relations, perceived stress, and use of new technologies. An online survey was administered to 415 students (mean age = 17.82), with instruments measuring media use habits, interpersonal relations, video game addiction and perceived stress. The 41% of the participants were male, 56% female and 3% chose not to declare gender. Results showed that 66.42% of participants reported an increase in Internet use during the lockdown and 40.77% reported an increase of videogames use. About 33% of participants resulted at risk of Internet Gaming Addiction (doubling pre-pandemic national rates). The uncertainty for the future ( $M = 3.41$  on a 1-5 scale) was the most relevant stressor. Finally, 43% of students reported that during the pandemic, the relation with their mother was improved and 34% said the same about the relations with their father. COVID-19 pandemic apparently heightened the risk of technological addiction; however, interpersonal relations seem to counteract as protective factors.



## INTERNET GAMING DISORDER AND SELF-CONCEPT CLARITY: THE MEDIATING ROLE OF BODY IMAGE COPING, AND AVATAR IDENTIFICATION

*Rocco Servidio (Dipartimento di Culture, Educazione e Società, Università della Calabria), Sara Nardi (), Stefano Boca (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo)*

Empirical evidence indicates a connection between avatar identification and Internet gaming disorder (IGD). While prior studies confirm this relationship, the results regarding the association of other variables related to IGD, such as self-concept clarity (SCC), are still scarce. This contribution explores the relationship between SCC and IGD. Additionally, we investigated the mediating role of body image coping strategies and avatar identification in this relationship. An online survey was conducted following the Italian Psychology Code of Ethics. The measures were: self-concept clarity, body image coping strategies, avatar identification, and IGD. An initial sample of 114 participants ( $M = 75$ ,  $F = 39$ ), with the age ranging from 18 to 59 ( $M = 25.82$ ,  $SD = 5.62$ ) were recruited, of which 84% were university students. We conducted a mediation analysis with self-concept clarity as an IV, avoidance, appearance fix, and avatar identification as mediators, and IGD as a DV. The results indicated that the indirect effect of self-concept clarity on IGD through avoidance was found significant,  $\beta = -.15$ , 95% CI[-.31, -.08],  $p < .001$ . Self-concept was directly negatively associated with IGD. Exploring the coping strategies may be helpful to prevent the risk of developing a gaming disorder.

## METHODS AND HISTORICAL THEMES IN TWENTIETH CENTURY ITALIAN PSYCHOLOGY

*Proponente: Andrea Bobbio (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

The symposium aims to offer some examples of the research methods that can be followed in order to deal with historical research in the field of the history of psychology. Three main approaches will be portrayed, namely historical-archival (i.e., storico-archivistico), historical-circumstantial (i.e., storico-indiziario), and historical-critical (i.e., storico-critico). The first contribution presents a reconstruction of the vicissitudes of the Paduan Institute of Psychology founded by Vittorio Benussi in 1919 and re-established by Fabio Metelli in 1954, based on both archival sources and taking into account the normative academic framework. The second talk examines the psychiatric report on Violet Gibson, the Anglo-Irish woman who attempted to assassinate Mussolini in 1926, drawn up by Sante De Sanctis and Augusto Giannelli. The third analyzes the debate on the culprit's imputability in the VI Congress of the Italian Phrenological Society held in 1899, with reference to the works by Silvio Tonnini and Silvio Venturi. Finally, the fourth discusses the use, initially spread by Gaspare Virgilio, of the Bertillonage system in the Italian mental asylums in the second half of the nineteenth century.

## THE INSTITUTE OF PSYCHOLOGY AT THE UNIVERSITY OF PADUA FROM BENUSSI TO METELLI (1919-1954)

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With reference to archival sources and to the normative academic framework, the vicissitudes of the Institute of Psychology founded by Vittorio Benussi in 1919 are followed until 1954. After Benussi's years (1919-1927), when the Laboratory of Experimental Psychology was created within the Faculty of Philosophy and Humanities, Cesare Musatti directed the Institute as an adjunct professor, in a period of marginalization of the discipline (1928-1938). When political-academic circumstances pushed Musatti to Milan (1940), the Paduan philosophers appointed the psychiatrist Carlo Berlucchi as lecturer of Psychology (1939-1941). The Institute was run by him, then by his colleague Giovanni Battista Belloni and from 1942 by Salvatore Maugeri, professor of Occupational Medicine and thus involved in the psychotechnical field. In 1943 Metelli started teaching Psychology and reorganized the Laboratory under the supervision of Maugeri. The chair originally created for Benussi in 1922 was finally re-established by Metelli in the newly created Faculty of Education in 1954. The above-mentioned events are representative of the phases of the discipline throughout the first half of the 20th century.

## THE DEBATE ON THE CULPRIT'S IMPUTABILITY IN THE VI CONGRESS OF THE ITALIAN PHRENOLOGICAL SOCIETY

*Maria Sinatra (Università degli Studi di Bari 'Aldo Moro' - Istituto del Design, Matera), Nicola Curci (Università degli Studi di Bari 'Aldo Moro')*

In 1986, the psychiatrist Ugo Fornari, after reading the acts of the VI Congress of the Italian Phrenological Society (Novara, 1889), considered the Congress a symbol of the Italian psychiatry of the nineteenth century, since the result was the definition of the biological characteristics of criminals and mads, and of their external manifestations. Hence, the use of photographs and drawings to “judge” gender, race, sexuality, social class, and physical ability of these people. However, the Lombrosian approach was not shared by all participants in the Congress. Our paper focuses on two participants. The first, Silvio Tonnini, was the director of various mental asylums and a professor of psychiatry. Dealing with degeneration and primitivism, he challenged Giuseppe Sergi's proposals arguing that there were also the degenerates who won in the struggle for existence. Social factors thus intervened in determining degeneration. The second speaker, Silvio Venturi, who directed the asylum of Nocera Inferiore, claimed that the characteristics of degeneration and congenital delinquency had to be differentiated from those of madness. Not by chance, he integrated the Haeckelian ontogenesis with Spencerian theses. Consequently, the compilation of reports should be reshaped

## UNFIT TO PLEAD? CONJECTURES AND EVIDENCES WITHIN THE PSYCHIATRIC REPORT ON VIOLET GIBSON (1876-1956) MUSSOLINI SHOOTER

*Giovanni Pietro Lombardo (Sapienza Università di Roma)*

The psychiatric report on Violet Albina Gibson, who with a gunshot had made attempt to Benito Mussolini on April 7, 1926 at Campidoglio, was drawn up by two psychiatrist, Sante de Sanctis and Augusto Giannelli, who ascertained woman's mental insanity. Then the Military Special Court, established for a few months, issued on May 6 1927 a judgment of impunity for insanity plea. The woman was then repatriated to London and was hospitalized in St.Andrew's Hospital where she remained for the rest of her life. Taking as a basis the critical study of the psychiatric diagnosis, never examined before by historians, the circumstantial and historical investigation leads to a new interpretation of Violet's mental competence and of her motivations for carrying out the attempt. Starting from some report emerging contradictions concerning Violet's conflictual relationship with Duke Colonna di Cesarò (1878-1940), her housing movements are analysed, to reconstruct the antifascist and anthroposophical path she came through to make attempt to Mussolini's life. Analyzing with a circumstantial and historical approach 59 report pages, we've been able to note additional inconsistencies, that suggest an implicit defensive strategy in Violet, based on a presumption of her impunity for insanity plea.

## THE USE OF THE BERTILLONAGE SYSTEM IN THE ITALIAN MENTAL ASYLUMS IN THE SECOND HALF OF THE NINETEENTH CENTURY

*Lucia Monacis (Università degli Studi di Foggia), Flavio Ceglie (Dipartimento di Studi Umanistici, Università degli Studi di Bari 'Aldo Moro')*

In order to develop a policy based on social protection, after 1870 object of particular attention became the offender's personality from the point of view of his/her biological and psychic anomalies. Sharing the Lombrosian doctrine, which affirmed the possibility of identifying the degenerative somatic and mental traits, Gaspare Virgilio, director of the Criminal Hospital of Aversa, tried to collect data on patients by means of a method that soon spread to other criminal asylums. Our oral presentation explores how this method, which concerned the so-called *fiche anthropométrique* invented by Alphonse Bertillon, was used in the different asylums to profile criminal minds. These data sheets were then the focus of a lively debate on how anthropometric and craniometric data should be collected, given the lack of a general agreement among psychiatrists on their reliability. Indeed, not all madmen and criminals showed cranial abnormalities, which could also be detected in healthy subjects. However, the problem of the choice of measurement techniques extended to the way of processing data using statistics.

# NEW FRONTIERS ON “QUALITY OF LIFE AT WORK” IN UNIVERSITIES: MODELS, TOOLS, AND BEST PRACTICES

*Proponenti: Paola Spagnoli (Università degli Studi della Campania ‘Luigi Vanvitelli’), Margherita Brondino (Università di Verona)*

Recent transformations in the labor market and in the concept of work itself have also had an impact on the university context. Moreover, due to the pandemic, the new ways of working, teaching and learning represented an important change for academic staff, teachers and students, who have suddenly switched from face-to-face forms of interaction to telematic ones. All these factors affect the well-being and can increase the development of psycho-social risk factors. For this reason, an interdisciplinary reflection is needed in order to identify tools, processes, and good practices aimed to organizational improvement. The debate regarding the issue of organizational well-being in the academic context is a contemporary topic addressed by the AIP group “Quality of Life at Work (QoL@Work)”, which proposes the current interdisciplinary symposium in order to provide a contribution including: a scoping review and a meta-analysis on the relationship between demands and psychological/health negative outcomes; a qualitative research on the practices of work-related stress assessment in the Italian academia; a preliminary validation of a new tool to assess the quality of working life in the Italian academic context; and a study on the remote working in the university administrative staff.

## CHALLENGING/HINDERING DEMANDS AND NEGATIVE PSYCHOLOGICAL/HEALTH OUTCOMES ON UNIVERSITY PROFESSORS AND RESEARCHERS: A SCOPING REVIEW AND PRELIMINARY RESULTS OF A META-ANALYSIS

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The aim of the study is to investigate the type of demands (hindering/challenging) perceived by professors/researchers, and their relationship with negative psychological/health outcomes. First, a scoping review was conducted following the PRISMA guidelines, and 37 of the 119 articles that emerged, published until 2020, were selected. Findings highlighted how specific demands (overload, time pressure), are not always considered as hindering or challenging in the same way, and how this affects their relationship with negative outcomes. In light of these findings, two meta-analytic models were examined on a total of 12809 participants. In model 1, following Crawford et al., work overload and time pressure were operationalized as challenges, whereas in model 2 a more specific operationalization of these demands was conducted according to the way in which they were considered hindrance/challenge in each study in the meta-analysis. Results showed an effect of demands on the outcomes in the two models (model1  $r = .18$ ,  $p = 0.004$ ; model2:  $r = .17$ ,  $p = .008$ ). The moderating effect of the type of stressors was statistically significant only in model 2: hindrance( $r = .25$ ,  $p = .002$ ); challenge( $r = .09$ ,  $p = .23$ ). Limitations, directions for future research and practical implication are also discussed.



## PRACTICES OF WORK-RELATED STRESS ASSESSMENT IN THE ITALIAN ACADEMIA: THE QoL@WORK MODEL

*Giuseppina Dell'aversana (Università degli Studi di Milano-Bicocca), Margherita Zito (Libera università di lingue e comunicazione IULM), Agnese Zambelli (Università di Bologna)*

The study is part of the work developed by the QoL@Work network that proposed a flexible model assessment of work-related stress risks based on a participatory approach in the Italian academia. The research aimed to explore strategies, barriers and facilitators in managing the academic work-related stress risks assessment and understand how the COVID-19 pandemic affected the implementation of these processes. A survey with open-ended questions was developed. A key informant for each University (n=11) completed the questionnaire. Data were analyzed through thematic analysis. Data confirm the key processes outlined by the model, but also heterogeneity of practices. It also allows for the discussion of recurring barriers and facilitators, and to deepen their specificities related to the pandemic. The main facilitators relied to the sharing of mutual interests between the members of the interdisciplinary committee group; the involvement of multiple stakeholders and the identification of tailored interventions. Conversely resistance towards the assessment process was a main barrier. Limited data were collected on the evaluation of the effectiveness of the interventions. Still, results confirm the direction taken by the QoL@Work network to fulfill the need to define shared guidelines.

## REMOTE WORKING DURING THE SECOND YEAR OF COVID 19 PANDEMIC: HINDRANCE OR OPPORTUNITY FOR UNIVERSITY ADMINISTRATIVE STAFF?

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The COVID-19 pandemic has considerably challenged the work-life of university administration staff. Remote working has become commonplace for many employees. Research showed a significant increase in psychological distress during the earliest stages in March 2020 (the lockdown phase), when suddenly employees were forced to work from home. However, little is known about the university administration staff's well-being and their perspective on remote working in the following phases of pandemic. The study explores university administrative staff's perceptions of remote working (challenge or hindrance) during the second year of the pandemic and their associations with work-related well-being. Moreover, it investigates the role played by job characteristics in shaping the perceptions of working remotely. Cross-sectional online surveys were conducted in two universities in Northern Italy in October-November 2021. A total sample of 1550 university administrative employees participated in the studies. Building on job demands-resources theory, findings highlight the interplay between different meanings attributed to remote working and job characteristics and their impact on the health impairment and motivational processes. Implications for the post-pandemic phase will be discussed.

## ACADEMIC QUALITY AT WORK TOOL (AQ@WORKT): A NEW TOOL TO ASSESS THE QUALITY OF WORKING LIFE IN THE ITALIAN ACADEMIC CONTEXT

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The present study aims at validating a new reliable tool to investigate the quality of working life in Italian academics, the Academic Quality at Work Tool (AQ@workT), developed by the QoL@Work thematic research group, i.e. academic experts in the field of work and organisational psychology affiliated to the Italian Association of Psychologists. The instrument is based on the Job Demands-Resources model. The psychometric properties of the scale were assessed in three studies with a large sample of teachers, researchers and professors: an initial pilot study (N = 120), a calibration study (N = 1084) and a validation study (N = 1481). Reliability and content, construct and nomological validity are supported, as well as measurement invariance with job role (researchers, associate and full professors) and gender. The evidence supporting the present study shows that the AQ@workT represents a useful and reliable tool to improve and provide guidance to university management of quality of work life or to manage work-related stress. Future studies, such as longitudinal testing of the AQ@workT, could also investigate the predictive validity of the instrument's variables.

# RELIEVING CHRONIC PAIN: THE ROLE OF PSYCHOLOGY

*Proponente: Federica Galli (Facoltà di Medicina e Psicologia, Sapienza Università di Roma)*

Chronic pain (CP), defined as pain lasting more than 3 months, is a substantial healthcare challenge. The new era of personalised medicine calls to the importance of tailoring medical and psychological interventions on the individual patient characteristics. It is progressively clear that psychology is called to take a strong action on its side, for understanding mechanisms and relieving symptoms and burden of CP deserves studies. Aim of this multidisciplinary symposium will be addressing the role of psychology by different perspectives. The symposium will provide two studies on chronic migraine: Bottiroli will report data on a new drug (Erenumab) for chronic migraine patients outlining the role of psychological factors for treatment outcomes. A second study by Cosci will report the preliminary findings of well-being therapy for chronic migraine. A further study will focus on Fibromyalgia, with a new point of interest on this disease: the executive functions. The last study by Cavicchioli and Galli will describe a systematic review whose aim is identifying a subgroup of chronic pain disease sustained by maladaptive dissociative mechanisms.

## PRELIMINARY RESULTS OF A PILOT STUDY TESTING THE EFFICACY OF WELL-BEING THERAPY IN CHRONIC MIGRAINE

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Chronic migraine is characterized by resistance to pharmacological treatment and poor response to psychological interventions. We tested whether a brief psychotherapy – Well-Being Therapy (WBT) - can be of benefit. Primary outcomes were disability due to migraine (as assessed via the Migraine Disability Assessment - MIDAS), frequency of migraine attacks (in the previous 15 days). Secondary outcomes were: anxious/depressive symptoms (as assessed via the Symptom Questionnaire – SQ), psychological well-being (as assessed via the Psychological Well-being Questionnaire – PWB and the World Health Organization Five-Well-Being Index - WHO-5). Assessment was run at baseline, after WBT sessions 4 and 8, at 3-month follow-up. The preliminary results collected in 13 patients (10 F, 3 M) show an overtime (GEE) decrease ( $p < 0.05$ ) of MIDAS (Wald chi square: 10.763), of number of migraine attacks (Wald chi square: 19.678), and of SQ anxiety (Wald chi square: 15.845) as well as an overtime increase of psychological well-being (PWB personal growth: Wald chi square: 10.142; PSI aims in life: Wald chi square: 14.015; PSI self-acceptance: Wald chi square: 9.572; WHO-5: Wald chi square: 9.815). WBT improves chronic migraine representing a step forward for managing it via psychological interventions.

## PSYCHOLOGICAL PREDICTORS OF NEGATIVE TREATMENT OUTCOME WITH ERENUMAB IN CHRONIC MIGRAINE: DATA FROM AN OPEN LABEL LONG-TERM PROSPECTIVE STUDY

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The main goal was to evaluate the psychological predictors of the outcome of treatment with the anti-CGRP monoclonal antibody erenumab in patients with chronic migraine (CM). Seventy-five CM patients received erenumab every 28 days for 12 months. Before the first administration, patients received a full psychological evaluation comprising mood, anxiety, and personality disorders as well as alexithymia traits, childhood traumas, and stressors. After 12 months of treatment, 53 patients reported a reduction of at least 50% in headache days/per month (Responders-R), whereas 22 did not (Non Responders-NR). When compared to R, NR were characterized by a higher prevalence of anxiety disorders and personality disorders belonging to Cluster C. They also showed more alexithymic traits and reported a higher number of at least serious current stressors. At the multivariate analysis, higher number of at least serious life events and higher prevalence of Cluster C personality disorders arose as prognostic factors of erenumab failure. In conclusion, Erenumab confirmed its effectiveness in a population of difficult-to-treat migraine. The presence of current stressors, anxiety and an “anxious-fearful” personality represent negative predictors of treatment outcome.

## SOCIAL COGNITION AND EMOTIONAL FUNCTIONING IN FIBROMYALGIA: ASSOCIATIONS WITH EXECUTIVE FUNCTION

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The present study aimed to investigate a large set of social-cognitive abilities and the possible relationships between those skills and the performance on executive function tasks in patients with FM. Forty women with FM and forty-one healthy women matched for education and age were recruited. Validated measures for the assessment of social cognition and executive function were employed. Patients with FM reported difficulties both in the identification of their own affect (FM patients vs. healthy women, mean  $\pm$  SD:  $54.75 \pm 9.93$  vs.  $44.56 \pm 10.09$ ,  $t(79) = 4.579$ ,  $p < .001$ ) and in the recognition of others' emotions ( $48.78 \pm 4.80$  vs.  $51.41 \pm 4.23$ ,  $t(79) = -2.627$ ,  $p = .010$ ), as well as in the representation of others' mental states ( $24.53 \pm 3.81$  vs.  $26.80 \pm 3.55$ ,  $t(79) = -2.787$ ,  $p = .007$ ). No significant correlations were found between social cognition tasks and either executive function or psychological measures (all  $p > .05$ ). These findings reveal the presence of several impairments in both social cognition and emotional functioning abilities in patients with FM. The impairments reported highlight the importance of adequately assessing those skills in clinical practice.

## PSYCHOLOGICAL AND NEUROBIOLOGICAL PROCESSES OF SOMATOFORM DISSOCIATION: A PROPOSAL FOR INCLUDING CHRONIC PAIN DISEASE WITHIN THE PSYCHOPATHOLOGICAL DISSOCIATIVE SPECTRUM

*Marco Cavicchioli (Facoltà di Psicologia, Università Vita-Salute San Raffaele Milano), Federica Galli (Facoltà di Medicina e Psicologia, Sapienza Università di Roma)*

Dissociation is a complex construct that includes two main types of manifestations: i) psychoform dissociation; ii) somatoform dissociation (e.g., analgesia, pain). Furthermore, dissociation is transdiagnostic dimension that identifies a spectrum including several conditions, such as conversion disorder (CD) and somatoform disorders (SDs). Dissociation across these conditions represents an involuntary and maladaptive form of emotion regulation. Accordingly, a network meta-analysis of fMRI studies (N = 44) that administered emotional stimuli across the previous disorders was conducted in order to clarify neural underpinnings of different forms of dissociation with a function of emotion regulation. Comparing CD and SDs (N=6) characterized by high levels of somatoform dissociation to healthy controls, meta-analytic findings showed a large deactivation of middle frontal gyrus and insula together with a heightened activity of cingulate cortex and hippocampus in response to emotional stimuli. Results will be discussed in the light of the development of specific assessment procedures for identifying a subgroup of chronic pain disease sustained by maladaptive dissociative mechanisms. Implications for psychological treatments of this medical condition will be also provided.



# SCHOOL INDOOR AND OUTDOOR PHYSICAL ENVIRONMENT: AFFECTIVE EXPERIENCE AND COGNITIVE PERFORMANCE EFFECTS

*Proponente: Paola Perucchini (Università degli Studi Roma Tre)*

The symposium addresses the psychological impacts of physical school environment on students and teachers at preschool and primary school level. Four studies will be presented that approach this issue from their disciplinary perspective. Sella et al. review the effects of forest school on preschoolers' development, showing its benefits on children's cognitive and motor skills, socio-emotional functioning, health and nature connectedness. Frison et al. investigate the effects of outdoor and indoor learning environments on text comprehension and math performance of primary school students, considering the moderating role of physiological self-regulation. Vettori et al. analyze the effect of quality of classroom acoustic conditions on verbal working memory. Using an experimental design with second graders, they demonstrate higher performance in adequate compared to poor acoustic conditions. Fornara et al. present a study on the role of outdoor teaching experiences on workplace restorativeness, workplace affective qualities and global wellbeing of preschool and primary school teachers. Taken together, these contributions bring new insight into school environmental literature and have significant implications for the implementation of possible interventions in the school.

## BENEFITS OF FOREST SCHOOL FOR PRESCHOOL CHILDREN: A SYSTEMATIC REVIEW

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Learning activities through contact with nature have been recognized to have positive effects on child development. Among the distinctive forms of outdoor learning, the experience of forest school has been suggested to be beneficial in learning and promote restorative effects on cognitive and emotional functioning in preschool children. In this review, we focused on the available evidence on the benefits of forest school in preschool children aged 3 to 6 years. A systematic search strategy was adopted using five databases. Of 117 articles, 20 studies were included (N=2,417 children; age range= 1-8 years). Children attending forest school reported improvements in cognitive abilities (attention, executive functions, creative thinking), and motor skills (balance, coordination), more than children in traditional education programs. Forest school produced also benefits in health, social-emotional skills, and nature connectedness. These findings highlight that forest school programs, compared to traditional indoor activities, show benefits in different development areas of cognitive and motor skills, emotional functioning, and health in preschool children. Literature on education programs in a forest environment offer a promising opportunity to sustain child health and development.

## EFFECTS OF GREEN OUTDOOR LEARNING ENVIRONMENT ON CHILDREN'S TEXT COMPREHENSION AND MATH PERFORMANCE: THE ROLE OF PHYSIOLOGICAL SELF-REGULATION

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Exposure to nature is thought to be beneficial for attentional resources, well-being and, consequently, academic success. The study investigated the effects of outdoor and indoor learning environments on oral text comprehension and math performance in primary school students (N=32). Their physiological self-regulation as indexed by heart rate variability (HRV) at rest was considered as a moderator variable. In a within-participants research design, academic performance was assessed indoor (classroom) and outdoor (school garden) using oral text comprehension and arithmetic calculus tasks. Results show that children performed better outdoor in both text comprehension,  $t(1,31)=-1.09$ ,  $p=.03$ , and math tasks,  $t(1,31)=-1.09$ ,  $p=.03$ . Good self-regulators performed better than poor ones in the math task ( $B=.05$ ,  $t=-.78$ ,  $p=.04$ ) in both environments. Higher HRV allowed better text comprehension but only when indoor ( $B=.06$ ,  $SE=.02$ ,  $t=2.70$ ,  $p=.01$ ). Results expand knowledge of the cognitive benefits of short-term exposure to nature in basic attention tasks. A brief contact with nature favors performance in fundamental school tasks. Moreover, the results indicate that good self-regulatory skills at physiological level promote better performances when learning in the classroom environment.

## THE EFFECTS OF DIFFERENT CLASSROOM ACOUSTIC CONDITIONS ON CHILDREN'S VERBAL WORKING MEMORY PERFORMANCE

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Working memory is crucial for learning during the school years. The present study compared primary school children's working memory performance of children under different acoustic conditions at school. Twenty-five second graders participated in the study by performing a verbal working memory task under two different acoustic conditions, with a time frame of 1 month: Poor acoustic quality (long reverberation time [Long RT] and babble) versus Adequate acoustic quality (short reverberation time [Short RT] and babble). The results showed that the children scored lower "Span" and "Recalled Words" indexes in the Poor acoustic quality condition than when they performed the task in the Adequate acoustic quality condition. Moreover, children omitted more words in the recall task in the Poor acoustic quality condition than in the Adequate acoustic quality condition. The results suggest that primary school children's verbal working memory is sensitive to variations in classroom acoustic conditions. These results have significant implications for the implementation of possible interventions in the school in terms of classroom design.

## THE PSYCHO-ENVIRONMENTAL IMPACT OF OUTDOOR TEACHING EXPERIENCES IN PRESCHOOL AND ELEMENTARY SCHOOL TEACHERS

*Ferdinando Fornara (Università di Cagliari), Oriana Mosca (Università di Cagliari), Carla Meloni (Università di Cagliari), Luisa Pedditzi (Università di Cagliari), Michela Schenetti (Università di Bologna), Emiliane Rubat Du Merac (Sapienza Università di Roma)*

The aim of this research is to verify the effect of outdoor teaching experiences on workplace restorativeness, workplace affective qualities and global wellbeing on school teachers. To this end, a comparison between school teachers working only indoor and school teachers working also outdoor was run. The sample includes about one hundred preschool and elementary school teachers (data collection is still in progress) working in different Italian regions. Participants have to fill in an online questionnaire including the Satisfaction with Life Scale - SWLS (Diener et al, 1985), the Need for Recovery - NFR (Van Veldhoven & Meijman, 1994), the Perceived Restorativeness Scale - PRS-11 (Hartig et al, 1991), the Affective Qualities of Place Scale (Perugini, Bonnes, Aiello, & Ercolani, 2002), and the Revised School Level Environment Questionnaire (Matteucci, Guglielmi, & Lauer mann, 2017). The results will be discussed in the light of the literature on restorativeness and connectedness to nature, with specific reference to the school environment. Limitations and future developments will be addressed.

## SEXUAL AND GENDER STIGMA: DEVELOPMENTAL, SOCIAL, AND CLINICAL PERSPECTIVES

*Proponenti: Marco Salvati (Dipartimento di Scienze Umane, Università di Verona), Cristiano Scandurra (Dipartimento di Neuroscienze e Scienze Riproduttive ed Odontostomatologiche, Università degli Studi di Napoli Federico II - Gruppo sulle Diversità e Disparità dei Generi (GDG) dell'Associazione Italiana di Psicologia)*

Sexual and gender stigma –that is the unequal treatment, collective negative view, and devalued status of non-heterosexual and non-normative identities, beliefs, behaviors, and expressions– is a global issue that affects the health and the psycho-social wellbeing of lesbian, gay, bisexual, transgender, and other sexual and gender diverse (LGBT+) people. Indeed, LGBT+ people still continue to experience barriers to accessing fundamental resources, such as labor market, healthcare systems, educational or family environments, representing a social group at risk of developing negative health outcomes. Recently, research on LGBT+ issues is dramatically increased, becoming progressively sophisticated and producing a large amount of data on health disparities, developmental paths, clinical practice, and social policy. Research on this topic is an excellent example of interdisciplinarity, as it requires the use of psycho-social perspectives that embrace, among others, developmental, social, and clinical psychology. Thus, the current symposium aims to introduce an interdisciplinary scientific discourse on sexual and gender stigma from different psychological disciplines and to suggest good practices and interventions that promote the health and the psycho-social wellbeing of LGBT+ people.

## CHILD-TEACHER RELATIONSHIP MODERATES THE IMPACT OF PEER MICROAGGRESSIONS ON SOCIAL SKILLS AMONG SCHOOL-AGE CHILDREN OF SEXUAL MINORITY PARENTS

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At school, peers may inadvertently microaggress children of sexual minority parents using heterosexist terminology, endorsing heteronormative ideas of family, and/or questioning their family structure. Teachers may play a key role in shaping the general peer ecology and supporting students' social development. A mixed-method, multi-informant, two-wave longitudinal design was used to examine the impact of peer microaggressions on child social skills and the buffering role of child-teacher relationship quality among 37 children of lesbian mothers through donor insemination and 33 children of gay fathers through surrogacy (Wave 1: Mage = 8.3 years, SD = 1.6; 51.4% girls; Wave 2: Mage = 9.9 years, SD = 1.7). Also, their 140 parents and 55 teachers participated. More intense W1 microaggressions predicted lower W2 social skills among children reporting a lower W1 child-teacher relationship quality, and greater W2 social skills among those reporting a higher W1 child-teacher relationship quality. Child-teacher relationship may be a safe context where children can overcome microaggressive experiences and improve social skills. The results sensitize about greater equality for children and parents across diverse family types, while informing both educational policy and practice.

## ASSOCIATIONS BETWEEN INCLUSIVE SCHOOL POLICIES AND LGBTI YOUTH'S ADJUSTMENT ACROSS EUROPE

*Salvatore Ioverno (Università degli Studi Roma Tre)*

Albeit to varying degrees, several European governments have implemented policies to reduce disparities at school based on youth's lesbian, gay, bisexual, transgender, and intersex (LGBTI) identities. This study aims at evaluating whether the presence of such policies is associated with positive adjustment among LGBTI youth across different European countries. Data were collected from 41,610 LGBTI youth aged 15 to 24 from 13 European countries. Self-reported measures examined LGBTI students' experiences of bias-based violence, perceived school safety, visibility at school, feelings of sadness/depression, life satisfaction, and awareness about the presence of LGBTI-inclusive policies at school. Multilevel regression analyses showed that LGBTI youth with more inclusive school policies had lower odds of lack of school safety and sadness/depression, and higher odds of life satisfaction. Inclusive teacher training and curricula were associated with less depression/sadness and less school bias-based violence. Whereas teacher training was associated with more visibility at school, inclusive curricula were linked to fewer bias-based harassment experiences. A multipronged national approach that includes teacher training and inclusive curricula is needed to better support LGBTI youth.



## GENDER IDENTITY MILESTONES, MINORITY STRESS, AND MENTAL HEALTH IN THREE GENERATIONAL COHORTS OF ITALIAN TRANSGENDER PEOPLE

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During the last years significant positive cultural changes have happened regarding the transgender community. Thus, this study assessed gender identity milestones (i.e., first insights about being transgender, self-labelling, and coming out), minority stressors, and mental health in three generational cohorts (Generation Z, Millennials, and Generation X) of Italian transgender individuals. 197 transgender people aged 18 to 54 years participated in an online survey. Chi-square tests and ANOVAs were performed to assess associations between variables. Compared with older cohorts, younger participants: (a) were more likely to be in the trans-masculine spectrum; (b) self-labelled as transgender and came out earlier; (c) had lower levels of disclosure and worse mental health. No generational differences related to first insights about being transgender and distal minority stressors were found. Compared with binary individuals, non-binary participants: (a) reported later ages for the gender identity milestones; (b) had higher negative expectations; and (c) had worse mental health. Overall, our findings indicated that changes in the social environments have a limited impact on stigmatization processes and health of Italian transgender people.

## THE GENDER IDEOLOGY AND LGBTQ LOBBY CONSPIRACY (GILC) SCALE: A SERIAL MEDIATIONAL MODEL PREDICTING COLLECTIVE ACTIONS INTENTIONS

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Despite the remarkable empirical work, the research on conspiracy beliefs (CBs) presents a huge gap, since it has quasi-totally neglected those related to LGBTQ people: the existence of a Gay Lobby which aims at the spread of homosexuality, the indoctrination of children in schools, the subversion of the natural order and the establishment of a dictatorship of single thought based on 'Gender Theory'. Firstly, this contribution aims at presenting the validation work of the Gender Ideology and LGBTQ Lobby Conspiracy (GILC) Scale. Through independent data collections involving nearly 1500 Italian straight participants, we have run EFA, CFA, and measurement invariance. The results showed that the GILC scale has a monofactorial structure, presenting very good psychometric properties with high levels of validity and reliability, differentiating both from existing scales of CBs and from tools of homonegativity. Secondly, we propose a serial mediational model in which LGBTQ CBs predict lower support to LGBTQ civil rights and lower intention of collective actions, through the increase of economic myths regarding LGBTQ people, and the denial that LGBTQ people live in a disadvantaged condition today (a modern form of homonegativity). Limitations and further directions will be discussed.

# THE BODILY SELF: FROM ITS DEVELOPMENT TO ITS INFLUENCE IN SOCIAL CONTEXTS AND MENTAL HEALTH

*Proponente: Laura Barca (Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche)*

This symposium aims to explore the centrality of the bodily self across development and its influence on: higher order cognitive and affective processes, social contexts, and mental health. It brings together studies in the fields of experimental, developmental, clinical and social psychology. Specifically, inner bodily sensations and their dysfunctions will be cast within a predictive coding and active inference view of brain functions, suggesting that flexible interoception is key to ensure adaptive regulation and mental health, and that psychopathological conditions can be productively understood in terms of maladaptive (excessively rigid) interoceptive processing (Barca). We will delve into the development of body-specific perceptual representations, comparing visual body recognition process in healthy adults and children at different stages of typical and atypical development (Urgesi). Finally, we will tackle multimodal exteroceptive-interoceptive integration processes and their role in the construction of bodily-self representation in healthy adults and psychopathological conditions (patients with Anorexia Nervosa) during stressful life events (Porciello), and in modulating interpersonal perception, specifically trustworthiness as measured in an economic game (Bulfalari).

## INTEROCEPTION AND THE PREDICTIVE BRAIN: THE BODY AS A SOURCE OF EVIDENCE

*Laura Barca (Istituto di Scienze e Tecnologie della Cognizione, Consiglio Nazionale delle Ricerche)*

Interoception is the sense of the physiological condition of the body. It has long been known that interoception is key for homeostatic and allostatic regulation; but more recently, there has been an increasing recognition of its fundamental importance for cognitive and emotional processes at large - as well as their dysfunctions. An emerging perspective is that interoception can be conceptualized within a general inferential view of the brain, which appeals to predictive coding and active inference. This perspective assumes that the brain continuously infers and controls incoming signals, including bodily signals – i.e., interoceptive (active) inference. In my talk, I will use this framework to address interoceptive dysfunctions, which have been increasingly associated with a variety of severe conditions, such as Eating Disorders. Specifically, I will discuss the case of the starvation behavior in Anorexia Nervosa, suggesting that the extreme eating restrictions may serve the fundamental role of keeping under control (i.e., reducing excessively high levels of) interoceptive uncertainty, above and beyond controlling and mitigating concerns for body weight.

## HOLISTIC VISUAL PROCESSING OF BODY STIMULI IN THE TYPICAL AND ATYPICAL DEVELOPMENT

*Cosimo Urgesi (Dipartimento di Lingue e Letterature, Comunicazione, Formazione e Società, Università degli Studi di Udine)*

There is inconsistent evidence that human bodies are processed through holistic processing as it has been widely reported for faces. To assess how configural and holistic processes develop with age, we administered a visual body recognition task assessing the presence of inversion and composite illusion effects to Caucasian adults (N=114) and children (N=138). To verify the presence of own-age bias in body processing, we presented either child or adult bodies to both age groups. Adults and children showed reliable and comparable inversion and composite illusion effects, confirming the use of configural and holistic body processing. Cross-sectional analysis showed that these perceptual strategies were already reliable in children aged 6-7 years and did not encounter significant changes across childhood. Although we found reliable body inversion and composite illusion effects for both own- and different-age bodies, results pointed to greater composite illusion effects for own-age bodies. This may suggest that sharing similar body structures might facilitate the holistic processing of others' bodies. Indeed, altered holistic, but not configural, body processing was detected in children and adolescents with cerebral palsy or later acquired brain tumor.

## THE RELEVANCE OF THE INTEROCEPTIVE AND EXTEROCEPTIVE BODILY SELF IN PSYCHOPATHOLOGY AND WELL-BEING

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A coherent representation of bodily self arises from the integration of exteroceptive (e.g. visual, tactile) and interoceptive (e.g. cardiac, gastric) signals. In two studies performed on healthy controls (HC) and females with Anorexia Nervosa (AN) we investigated exteroceptive and interoceptive components of bodily self and its contribution to psychopathology and wellbeing. Specifically, in Study 1 we tested the effects of embodying different body-size avatars on body representation in AN and HC. We found higher body image plasticity and lower awareness of visceral signals in AN compared to HC. Furthermore, AN considered normal weight avatars as the most similar to their body, the least attractive and the most disgusting ones. These measures correlated with their symptoms' severity. In Study 2, we tested HC for changes in interoception and its relationship to well-being, during different stages of COVID-19 pandemic. We found that well-being during and after the quarantine was predicted by specific components of interoception. Overall, these findings suggest that a stable bodily representation, both in the exteroceptive and interoceptive domains, could play a crucial role in psychopathology, and could eventually be considered a protective factor against stressful life events.

## INTERPERSONAL MULTISENSORY STIMULATION AS A TOOL TO INDUCE PLASTIC CHANGES TO SELF-REPRESENTATION AND SELF-OTHER PERCEPTION

*Ilaria Bufalari (Dipartimento di Psicologia, Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma), Sofia Ciccarone (Dipartimento di Psicologia, Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma)*

Studies show that we can change the representation of the self and self-other boundaries, i.e. induce bodily self-other merging. Experiencing tactile facial stimulation while seeing similar stimuli delivered to another face as in a mirror (IMS procedure), induces a self-attribution bias of the other's face and changes neural self-representation accordingly. Here we show that the extent of this effect depends on how individuals define the self in relation to others: interdependent - but not independent - self construal positively predict self-other merging. IMS may also change interpersonal perception by increasing closeness and attraction towards that specific person. Here, we show that experiencing IMS with a previously unknown other may increase interpersonal trust with that person, through increasing bodily self-other merging, and this effect is moderated by perceived trustee's facial trustworthiness (recorded before IMS). In line with the free-energy theoretical account, we speculated that bodily self-other merging may generalize to social processing of others firstly through an increase in perceived physical similarity between self and other and then in conceptual domain, leading to a generalization of positive self-like associations to the other.

## THE PANDEMIC HEROES: BUT WHAT FOR? A CRITICAL PLOT TWIST ON THE STUDY OF NURSES' WELLBEING

*Proponente: Francesco Tommasi (Dipartimento di Scienze Umane, Università di Verona)*

The symposium situates the burgeoning domain of studies on nurses' well-being, and within the broader mainstream view of nurses as Pandemic heroes. Studies on nurses place a particular emphasis on wellbeing as the ultimate outcome of psychological investigations and applied psychological interventions. Moreover, implicit thinking in personal and professional ideologies echoes the focus on wellbeing when denoting nurses as "heroes" of the pandemic. Coupling psychosocial, psychodynamic, and organizational approaches, the symposium draws on a pluralistic approach to argue that while studying nurses' wellbeing is worthwhile, this nonetheless risks neglecting intra-subjective and inter-subjective mechanisms (e.g., cognitive-affective processes) leading to question the meaning of nurses' wellbeing. Accordingly, we advance a critical plot twist on the study of nurses by which foreshadowing theoretical and methodological perspectives. The symposium combines the following contributions: a scoping review on burnout among intensive care unit nurses during the pandemic; a mixed methods study on the nurses' meaning and subjective wellbeing; a quantitative study on nurses' emotions self-regulation; a qualitative investigation into the dark side of being "heroes" based on nurses' narratives.



## “WE CAN BE HEROES”: ON NURSES’ EMOTIONS SELF-REGULATION REPERTORIES

*Anna Maria Meneghini (Dipartimento di Scienze Umane, Università di Verona), Sofia Morandini (Dipartimento di Scienze Umane, Università di Verona), Daiana Colledani (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

Emotion regulation (ER) represents one of the mechanisms associated with nurses’ well-being. Despite this, there is still little knowledge about the strategies they habitually use and how these are related to their caregiving orientations. The Italian version of the Regulation of Emotions System Survey to assess the frequency of use of six ER strategies was administered to 462 health-care providers (212 nurses, Mage=34.75, SD=12.30, 61.38% female; 250 first responders, Mage=32.12, SD=11.45, 44.7% females). Results of the latent profile analysis revealed that healthcare providers show three ER repertoires, namely Average (i.e., scores near the group mean for all the strategies), Suppression Propensity (i.e., the predominant use of suppression), and Engagement propensity (i.e., tendency to amplify emotional expressions). Moreover, Engagement Propensity resulted the most frequent repertoire for nurses ( $z=2.24$ ,  $p<.05$ ) compared to first responders ( $z=-2.06$ ,  $p<.05$ ). In addition, the analysis of nurses’ caregiving orientations measured via the Caregiving System Scale showed that high levels of hyperactivation of the Caregiving System associates with Engagement propensity repertoire. These findings contribute to our knowledge of the role of emotions among different healthcare providers.

## BEHIND THE MASK. THE DOUBLE EMERGENCY OF NURSES: NARRATIVE VOICES FROM THE PANDEMIC

*Marta Piria (Università Cattolica del Sacro Cuore), Mara Gorli (Università Cattolica del Sacro Cuore)*

The pandemic has changed work and organizational structures at many levels. COVID-19 has represented turbulence impacting the choices of healthcare professionals and their boundaries between it and the sphere of private life. Fresh in our collective memory is the effort of healthcare professionals on the front line, in the face of emergency and uncertain conditions. We called them “heroes”, for their dedication and invaluable presence. And yet, data show a crisis in health personnel employed in urgent emergency services. Scholarships for emergency medicine specializations are filled by 60%, highlighting high dropout rates. Professional identities in crisis are impacted by various factors, among which the experience of professional risk hitting the family sphere so closely during the pandemic. This study features a collection of narratives by health professionals - nurses in particular - during the COVID-19 emergency. The data drawn from written excerpts using a narrative approach illustrate reactions, emergency management methods, and emotional repercussions at the forefront of hospital emergency sectors. The contribution highlights the motivations and aspirations related to professional choices and the management of personal and family life in times of crisis.

## “THOUGH NOTHING WILL KEEP US TOGETHER”: MIXED METHODS STUDY OF NURSES’ MEANING IN LIFE AND WORK

*Francesco Tommasi (Dipartimento di Scienze Umane, Università di Verona), Riccardo Sartori (Dipartimento di Scienze Umane, Università di Verona), Evie Michailidis (Department of Business and Public Administration, University of Cyprus, Cyprus), Andrea Ceschi (Dipartimento di Scienze Umane, Università di Verona)*

In the healthcare arena, emergency nurses may live intense and overwhelming events affecting their meaning in work. Meaning in work represents the reason of why nurses work and endow their work with importance. However, traumatic, and prolonged-stress conditions can challenge not only the individuals’ quest for meaning in work but also their quest for meaning in life. We examined factors influencing subjective wellbeing and meaning in life and work in emergency nurses. A mixed methods study design was utilised by collecting from a sample of emergency nurses both quantitative (n = 200) and qualitative data (n = 9). With the use of a cross-sectional study data on the meaning in life, meaning in work, stress-levels, and attitude towards death in nurses were collected. Autobiographic stories of nurses examined the lived experience of nurses. Quantitative findings indicated that nurses’ lower levels of meaning in work and meaning in life were positively related to detrimental levels of stress and their attitude towards death. Qualitative data indicated that despite favourable experience of meaning, nurses’ stories emphasized self-perceived barriers, including organizational constraints preventing them from disengaging from intrusive thoughts with co-workers’ relation disadvantages.

## STANDING BY THE WALL”: A (SCOPING) VIEW ON ICU NURSES’ BURNOUT

*Ferdinando Toscano (Università di Bologna)*

The COVID-19 pandemic strained hospitals and workers engaged in combating this virus with limited knowledge and resources. Intensive care unit (ICU) nurses have been among the healthcare workers most affected by the pandemic and are at risk for developing burnout syndrome (BOS). This study explores BOS prevalence among ICU nurses and identifies individual-, organizational-, and contextual-level risk and protective factors of BOS in ICU nurses during the COVID-19 pandemic. A scoping review was conducted by querying PubMed, Scopus, and Web of Science. A total of 180 initial papers were yielded, and 26 were screened for full-text. Five papers constituted the final sample. High levels of all three components of BOS (emotional exhaustion, depersonalization, and reduced personal accomplishment) were registered among ICU nurses during the COVID-19 pandemic. High workload, lack of equipment, social stigma, and contagion fear emerged as the main risk factors. Social support from leaders and colleagues, professional recognition, use of personal protective tools, and witnessing patients’ successful recovery emerged as the main protective factors. The results may inform the development of timely actions to counter BOS in ICU nurses during the COVID-19 pandemic and future health emergencies.

## WHAT DO WE SEE IN FACES? AN INTEGRATED PERSPECTIVE OF SOCIAL AND EMOTIONAL DETERMINANTS OF FACE PERCEPTION

*Proponente: Simone Mattavelli (Università degli Studi di Milano-Bicocca)*

In everyday life, impressions and behaviors are influenced by facial features. Thus, studying the determinants that drive such outcomes is a prominent research goal. In this symposium, four contributions present empirical findings on the psychological determinants (and consequences) of face perception. In the first contribution, Ferrari and Cattaneo explore the neural underpinnings of impressions derived from face perception, using Transcranial Magnetic Stimulation (TMS). In the second contribution, Quadrelli and coauthors examine the impact of social exclusion on infants' behavior and on the neurophysiological processing of emotional faces. Next, Mattavelli and coauthors consider the role of the context in influencing humans' responses to other faces, showing that inferences made on context-face relationship are key to ascribe facial trustworthiness. In the fourth contribution, Valmori and coauthors investigate the individual dispositions that drive socio-economic attributions from others' face, focusing on target's gender as moderator. Taken together, these contributions highlight the importance of adopting an integrated approach to unveil both the mechanisms and the conditions under which human behavior is influenced by others' faces.

## NEURAL CORRELATES OF SOCIAL IMPRESSIONS FROM FACES AND BEHAVIORS: A TMS STUDY

*Chiara Ferrari (Università di Pavia), Zaira Cattaneo (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Human interactions are a source of extremely complex information that needs to be rapidly processed in order to meet the demands of the immediate social situation. Individuals have developed the ability to draw inferences about other people's personality traits from minimal information, as the observation of another person's face or single behavior is sufficient to trigger spontaneous inferences about his/her traits. In a series of experiments, we assessed, using Transcranial Magnetic Stimulation (TMS), the contribution of the dorsomedial prefrontal cortex (dmPFC) and occipital and temporal nodes in the face perception network to the formation of others' social impressions based on face appearance and behaviors. Overall, results showed that the dmPFC plays a key role in creating impressions about others when they are formed upon the integration of social behaviors and face appearance. In turn, when social impressions are created upon face appearance alone the dmPFC is not causally involved and preliminary data suggest that regions in the occipitotemporal face perception network play a more relevant function in the social evaluation of others' faces.

## YOU CAN'T PLAY WITH US: SOCIAL EXCLUSION MODULATES INFANTS' BEHAVIOR AND NEURAL PROCESSING OF EMOTIONAL FACES

*Ermanno Quadrelli (Università degli Studi di Milano-Bicocca), Julia Mermier (Università degli Studi di Milano-Bicocca)*

Decoding facial emotions is critical in guiding social interactions, especially before the onset of language. This ability develops rapidly in infancy and is known to be affected by contextual information and social experiences. Research on the effects of social exclusion in adults revealed that it induces physiological, and behavioral changes and modulates the processing of social information. Yet only few studies investigated children and infants' behavioral and neurophysiological responses to self-experienced social exclusion. The current study aimed at exploring 13-month-olds' behavioral reactions to social inclusion and exclusion and investigating the impact of self-experienced social exclusion on infants' neural processing of emotional faces. Infants' behavior was recorded while they participated in a live ball-tossing paradigm (i.e., Cyberball) where they were either included (N=49) or excluded (N=49) from the game. After exposure to the Cyberball, event-related potentials were recorded in a sub-sample in response to the observation of dynamic expressions of anger, fear and happiness. Obtained results demonstrate that social exclusion influences infants' involvement and behavior in social interactions, and also affects the neural processing of emotional facial expressions.

## ON THE INFERENCES WE MAKE ABOUT FACES IN CONTEXTS: FACE-CONTEXT INTEGRATION IS MODERATED BY RELATIONAL ENCODING

*Simone Mattavelli (Università degli Studi di Milano-Bicocca), Matteo Masi (Università degli Studi di Milano-Bicocca), Marco Brambilla (Università degli Studi di Milano-Bicocca)*

Recent work showed that the attribution of facial trustworthiness can be influenced by the surrounding context in which faces are embedded: contexts that convey threat make faces less trustworthy. In two studies (N = 220) we tested whether face–context integration is influenced by how faces and contexts are encoded relationally. We explored such a relational encoding by using direct and subtle manipulations. In Experiment 1, we used verbal instructions to manipulate the role played by facial stimuli in the surrounding context (i.e., perpetrator vs. victim). Such a manipulation significantly moderated face–context integration: When target’s faces were presented as victims then the contextual threat influenced facial trustworthiness to a lesser extent than when presented as perpetrators. In Experiment 2, we manipulated the emotional expression of faces (i.e., fearful vs. happy). Participants perceived faces in threatening contexts as less trustworthy when happy as opposed to fearful. Taken together, our findings suggest that face-context integration is moderated by the inferences made by the perceiver about the role played the target individual in the surrounding context.



## PERCEIVING SOCIOECONOMIC STATUS FROM FEMALE AND MALE FACES: AN ANALYSIS OF GENDER-BASED DIFFERENCES

*Alessia Valmori (Università degli Studi di Padova), Francesca Carotta (Università degli Studi di Padova),  
Luciana Carraro (Università degli Studi di Padova), Luigi Castelli (Università degli Studi di Padova)*

People infer personality traits by rapidly looking at others' faces. Previous literature has shown the strong impact of these inferences in shaping participants' first impressions in various domains. Recently, research has also focused on the attribution of socioeconomic status (SES). The aim of our project is to further investigate this issue and to explore whether different traits inferred from faces are used as a function of the gender of the target. Study 1 demonstrates that in general people strongly rely on face-based inferences, and more specifically that trustworthiness and attractiveness were stronger predictors for female targets. In Study 2, participants were presented with male vs. female faces that were pretested as being perceived as having high vs. low SES. For each of them, verbal information about SES was also provided and the task required to evaluate each target on 14 traits. Beyond the strong effect of verbal information, facial features remained significant predictors of trait inferences. Notably, this latter effect tended to be stronger in the case of female targets. Overall, the present data further demonstrate the key role of faces in person perception and how this phenomenon can take nuanced shapes as a function of gender.

## WORKING MEMORY: HOW DOES IT WORK?

*Proponente: Sergio Morra (Università di Genova)*

There is general agreement that WM has a major role in higher cognitive processes; however, several models of WM compete for hegemony in the field, and numerous theoretical issues are open to debate. What is the relation between WM and LTM? How is WM capacity limited? How to account best for dissociations between content domains? What operations are involved in functions (such as refreshing and updating) that regulate WM? Does emotional arousal interact with WM processes? Can we train WM and improve its functioning? This symposium includes papers that deal with several of these questions. Palladino, Artuso & Belacchi present two experiments that examine the effect of LTM semantic associations on the updating process in an n-back task. Valentini & Vergauwe present a set of studies about refreshing in children from 7 to 15 years old. Costanzi, Cianfanelli, Esposito, Spataro, Cestari & Rossi-Arnaud investigate the effect of emotional stimuli on performance in an object-location memory task. Borella, Carbone & Carretti investigate WM training in the elderly, examining the effects of task complexity and individual differences on training effectiveness and transfer benefits. The discussant paper (by Morra, Patella & Muscella) deals with capacity limits: is the magical number 4 or 7?

## WORKING MEMORY AND LONG TERM MEMORY: UPDATING ASSOCIATED WORDS

*Paola Palladino (Università degli Studi di Foggia), Caterina Artuso (Dipartimento di Scienze della Comunicazione, Studi Umanistici e Internazionali, Università di Urbino), Carmen Belacchi (Dipartimento di Scienze della Comunicazione, Studi Umanistici e Internazionali, Università di Urbino)*

The focus of the current study is on how long-term knowledge impacts WM updating. Updating is a core mechanism of WM responsible for its stability and flexibility. Only few studies specifically investigated how WM updating may be affected by LTM related material. If we assume that item substitution is the distinctive updating component we believe it is important to examine the strength/quality of the association between stimuli since it is likely to modulate the substitution process. To examine how updating operates in the flow of verbal meaningful information an n-back task was used. The n-back task requires continuous monitoring of incoming information and recognition of probed words, whenever the participant encounters a match between the current stimulus and the one presented n positions back in the sequence. In Experiment 1, we found an advantage for semantically-related words (vs. unrelated) regardless of their association type (i.e., taxonomic or thematic). A second experiment was run boosting semantic association through pre-activation. Findings replicated those of Experiment 1 suggesting that pre-activation was effective and improved semantic superiority. In sum, we demonstrated that long-term semantic associations benefitted the updating process and overall WM function.

## THE LAST-PRESENTED BENEFIT AS AN INDEX TO INVESTIGATE THE DEVELOPMENT OF ATTENTIONAL REFRESHING

*Beatrice Valentini (University of Geneva, Switzerland), Evie Vergauwe (University of Geneva, Switzerland)*

Several mechanisms are assumed to support the substantial improvement in working memory observed during childhood. One of them is refreshing. Refreshing is an attention-based maintenance mechanism that improves the accessibility of mental representations. It is assumed to operate serially, with attention cycling from one mental representation to the other, in order to sequentially reactivate every to-be-maintained list item. Although it has been suggested that the efficiency of refreshing increases between 7 and 14 years old, recent results seem to contradict this notion. In fact, by using a recently-developed index to detect the occurrence of refreshing, i.e., the last-presented benefit, no sign of attentional refreshing was found until the age of 11 (Vergauwe et al., 2021). Here, we present a set of studies manipulating the time available to engage in refreshing, to examine when spontaneous attentional refreshing occurs in children of different age groups (i.e., 7-8 years-olds, 11-12 years-olds and 14-15 years-olds).

## WORKING MEMORY AND EMOTIONS: HOW EMOTIONAL STIMULI AFFECT VISUO-SPATIAL WORKING MEMORY PERFORMANCE

*Marco Costanzi (Dipartimento di Scienze Umane, Lumsa Università di Roma), Beatrice Cianfanelli (Dipartimento di Scienze Umane, Lumsa Università di Roma), Antonino Esposito (Dipartimento di Scienze Umane, Lumsa Università di Roma), Pietro Spataro (Dipartimento di Economia, Universitas Mercatorum), Vincenzo Cestari (Dipartimento di Psicologia, Sapienza Università di Roma), Clelia Rossi-Arnaud (Dipartimento di Psicologia, Sapienza Università di Roma)*

Remembering places in which emotional events occur is essential for individuals' survival. However, the mechanisms through which emotional stimuli are processed in visuo-spatial working memory (VSWM) are little understood and controversial. We used a modified version of the object-location task to investigate how emotional stimuli affect VSWM performance. After displaying a simultaneous array of black rectangles, emotional pictures (chosen from IAPS based on arousal and valence levels) appeared sequentially over each rectangle. Participants repositioned the rectangles as accurately as possible after all stimuli had disappeared. The first part of the study utilized both between- and within-subjects designs to manipulate valence and arousal of pictures. In the second part of the study, a dual-task paradigm was used to examine the role of visuo-spatial sketchpad, central executive, and episodic buffer in processing visuo-spatial information and emotion. Results suggest that emotions enhance memory when neutral and emotional stimuli compete with one another for access to WM. In this competition, an interplay between valence and arousal seems to be at work. Furthermore, emotional stimuli seem to be bound to visuo-spatial information in the episodic buffer through automatic processes.

## WORKING MEMORY TRAINING IN OLDER AGE: EVIDENCE OF ITS EFFICACY AND HOW INDIVIDUAL DIFFERENCES EXPLAIN THE GAINS

*Erika Borella (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Elena Carbone (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Barbara Carretti (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Age-related changes in older adults' working memory (WM), and the impact on their ability to manage everyday demands and activities have been well documented. Hence the development of WM training programs to counteract the age-related decline in such a core cognitive mechanism and thereby support older adults' cognitive functioning and promote their quality of life. This presentation discusses the efficacy of WM training for older adults, which is still a matter of debate. It also examines the role of individual characteristics in explaining who benefits most from such training programs, how and why, in terms of both a better WM and transfer effects to other related mechanisms, and to complex cognitive abilities needed for everyday functioning. The results of four studies on 148 typically-aging older adults are presented: 73 of them participated in a WM training program, while 75 engaged in alternative activities, serving as active controls. In addition to confirming the efficacy of the proposed WM training in generating training gains and transfer effects - in the short term, at least - the findings suggest a different role for individual characteristics depending on the outcome measures considered and their complexity (the amount of processing demanded by a given task).

# Psicologia Clinica e Dinamica

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# FROM THE “CONSENSUS CONFERENCE ON PSYCHOLOGICAL THERAPIES FOR ANXIETY AND DEPRESSION” TOWARDS IMPLEMENTING GUIDELINES IN CLINICAL PSYCHOLOGY

*Proponente: Daniela Palomba (Università degli Studi di Padova)*

*Partecipano: Ezio Sanavio (Università degli Studi di Padova), Renata Tambelli (Sapienza Università di Roma), Piero Porcelli (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*



# **PERINATAL MENTAL HEALTH AND COVID-19: A DIALOGUE BETWEEN INSTITUTIONS ON THEORY, PRACTICE AND RESEARCH**

*Proponente: Pietro Grussu (Consultorio Familiare, Azienda ULSS 6 Euganea)*

*Partecipano: Pietro Grussu (Consultorio Familiare, Azienda ULSS 6 Euganea), Ilaria Lega (Centro Nazionale per la Prevenzione delle Malattie e la Promozione della Salute, Istituto Superiore della Sanità), Enrica Pizzi (Centro Nazionale per la Prevenzione delle Malattie e la Promozione della Salute, Istituto Superiore della Sanità), Olivia Spinola (Sapienza Università di Roma)*

# PERSONALITY DISORDERS: WHERE DO WE COME FROM AND WHERE DO WE GO NOW

*Proponente: Antonello Colli (Dipartimento di Studi Umanistici, Università di Urbino)*

*Partecipano: Antonello Colli (Dipartimento di Studi Umanistici, Università di Urbino), Fabio Madeddu (Università degli Studi di Milano-Bicocca), Mario Rossi Monti (Dipartimento di Studi Umanistici, Università di Urbino)*

# RESEARCH, TRAINING AND PUBLIC ENGAGEMENT IN CLINICAL PSYCHOLOGY OF AGING: A MANIFESTO PROPOSAL

*Proponente: Rabih Chattat (Università di Bologna)*

*Partecipano: Rabih Chattat (Università di Bologna), Antonella Granieri (Università degli Studi di Torino), Donatella Petretto (Università di Cagliari), Maria Catena Ausilia Quattropiani (Dipartimento di Scienze della Formazione, Università di Catania)*

# TESTING AND ASSESSMENT: OLD PROBLEMS AND NEW HORIZONS

*Proponente: Adriana Lis (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

*Partecipano: Filippo Aschieri (Università Cattolica del Sacro Cuore), Roberta Daini (Università degli Studi di Milano-Bicocca), Daniela Traficante (Università Cattolica del Sacro Cuore), Adriana Lis (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

# CLINICAL PSYCHOLOGY OF AGING: NEW DEVELOPMENTS AND EMERGING RESEARCH FRONTIERS

*Proponente: Rabih Chattat (Dipartimento di Psicologia, Università di Bologna)*

This symposium provides an overview of some new developments and emerging research frontiers in the field of clinical psychology of aging. In the first contribution, Cammisuli evaluated the efficacy of a human body wearable device (Comftech Howdy Senior®) in rehabilitation of older adults with Parkinson's disease, with reference to increased cognitive functioning, cardiovascular health, and high user satisfaction. In the second contribution, Sardella conducted a systematic review focused on the uniqueness of older adults' emotional processes, as compared with young adults' ones. Evaluating emotional processes, in addition to other areas of older adults' functioning, would allow to develop interventions to improve their adaptation to age-related comorbidities. The third contribution, by Favieri, explores the importance of executive functioning in Mild Cognitive Decline (MCD), which has been little considered so far. Including executive function in MCD would help to better define trends in cognitive and functional impairment, and to develop treatments focused on enhancing this domain to reduce the impact on older adults' daily lives. Overall, results show the unique role of clinical psychology and new advances in research and practice in healthy and pathological aging.

## USEFULNESS OF A HUMAN BODY WEARABLE DEVICE (COMFTECH HOWDY SENIOR®) IN REHABILITATION OF OLDER ADULTS WITH PARKINSON'S DISEASE: COUNTERACTING DISEASE'S PROGRESSION AND IMPROVEMENT OF CARDIOVASCULAR HEALTH

*Davide Cammisuli (Università Cattolica del Sacro Cuore), Armienti Enrica (Associazione di Promozione Sociale 'La Tartaruga' - Misericordia di Pisa), Moira Marchionni (Associazione di Promozione Sociale 'La Tartaruga' - Misericordia di Pisa), Viola Ramalli (Associazione di Promozione Sociale 'La Tartaruga' - Misericordia di Pisa), Nicolosi Ornella (Associazione di Promozione Sociale 'La Tartaruga' - Misericordia di Pisa), Leonardo Cioni (Associazione di Promozione Sociale 'La Tartaruga' - Misericordia di Pisa), Gianluca Antonelli (Associazione di Promozione Sociale 'La Tartaruga' - Misericordia di Pisa), Andrea Tamorri (Associazione di Promozione Sociale 'La Tartaruga' - Misericordia di Pisa), Gianluca Castelnuovo (Università Cattolica del Sacro Cuore - IRCCS Istituto Auxologico Italiano)*

Parkinson's disease (PD) is characterized by motor and non-motor symptoms, such as cognitive deterioration. 6 patients with idiopathic PD (M: 5; F: 1; mean age  $72.1 \pm 6.2$ ) underwent a physical training program (55 min, 3 times a week for 3 months). They were assessed by an assessment battery consisting of neurocognitive (i.e., MoCA, Visual Search, TMT, Stroop Test), and motor measures before and after the intervention. The physical training program was set up into four phases, as follows: relaxation (10 min), warm up (15 min), walking (10 min), and recovery (30 min). Participants got dressed a sensorial body (Comftech Howdy Senior®) with a connected App for smartphone, specifically collecting measures of heart rate (MSSD; RMS-SD; RR50; pRR50; SD1), respiratory rate, and gait. Non-parametric tests were performed on neurocognitive/motor measures and recovery data. Significant differences were reported in MSSD, RMSSD, RR50, pRR50 e SD1 ( $p < .05$ ) at the end of the intervention, with stability of neurocognitive status. Rehabilitation through specific physical training protocols adopting human body wearable device is effective in PD for cognitive functioning and cardiovascular health, with appreciable levels of users' satisfaction.

## ANALYSIS OF THE LINGUISTIC FEATURES OF SPEECH PRODUCTION FOR AN EARLY DIAGNOSIS OF MILD COGNITIVE IMPAIRMENT AND ALZHEIMERS DISEASE: A REVIEW OF THE SCIENTIFIC LITERATURE

*Fanny Cerri (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Federico Abodi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Viviana Langher (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

In recent years, the communicative abilities of MCI and AD patients have been investigated, especially with respect to the characteristics of their spoken natural language. An accurate analysis of their speech performance, at even a prodromal stage of the disease, seems to be a promising tool of investigation and clinical detection of language impairment. In several kinds of dementia, speech features by patients with diverse disease severities, have been primarily investigated by means of measures of grammar and syntactic accuracy and complexity, lexical content, fluency, word finding, semantic content, and other aspects of the communicative discourse. In the present paper, we summarize and discuss some results reported by recent scientific literature, especially in the field of early clinical diagnosis, and perspectives on life quality enhancement for patients with dementia. Our intent is to underline the need for an increasing effort in order to achieve a better comprehension of MCI and AD specific abilities in communication through language.

## CLINICAL PSYCHOLOGY OF AGING: NEW DEVELOPMENTS AND EMERGING RESEARCH FRONTIERS'

*Rabih Chattat (Dipartimento di Psicologia, Università di Bologna)*

This symposium provides an overview of some new developments and emerging research frontiers in the field of clinical psychology of aging. In the first contribution, Cammisuli evaluated the efficacy of a human body wearable device (Comftech Howdy Senior®) in rehabilitation of older adults with Parkinson's disease, with reference to increased cognitive functioning, cardiovascular health, and high user satisfaction. In the second contribution, Sardella conducted a systematic review focused on the uniqueness of older adults' emotional processes, as compared with young adults' ones. Evaluating emotional processes, in addition to other areas of older adults' functioning, would allow to develop interventions to improve their adaptation to age-related comorbidities. The third contribution, by Favieri, explores the importance of executive functioning in Mild Cognitive Decline (MCD), which has been little considered so far. Including executive function in MCD would help to better define trends in cognitive and functional impairment, and to develop treatments focused on enhancing this domain to reduce the impact on older adults' daily lives. Overall, results show the unique role of clinical psychology and new advances in research and practice in healthy and pathological aging.



## EXECUTIVE FUNCTIONS: A RELEVANT FEATURE OF COGNITIVE DECLINE. CLINICAL IMPACT OF EXPERIMENTAL EVIDENCE

*Francesca Favieri (Dipartimento di Psicologia, Sapienza Università di Roma), Giuseppe Forte (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Maria Casagrande (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Both physiological and pathological decline in aging is characterized by a loss of cognitive functioning from mild to severe. This decline involves many cognitive domains, and it is characterized by memory difficulties, poor mental flexibility, lower ability to inhibit responses and appropriately respond to environmental stimuli. According to its severity, cognitive decline can affect daily life activities. However, in the classification of Mild Cognitive Decline (MCD), low attentional focus in the clinical field was directed toward executive functioning, a cognitive domain highly relevant for goal-directed behaviors and positive daily functioning. Analyzing the main features of executive functioning in MCD and the main differences from healthy to pathological aging can help define the impaired trend of functioning, which affects decline. Clinicians should consider including executive functioning in the diagnostic classification of MCD. This new classification would be useful for developing novelty treatments focused on enhancing this domain to reduce the impact on the daily life of elderly people. Experimental evidence on executive functioning in MCD may clarify these aspects.

## THE CLINICAL ASSESSMENT OF EMOTION REGULATION IN THE ELDERLY: A SYSTEMATIC REVIEW OF THE LITERATURE, AND A FOCUS ON FUTURE PERSPECTIVES

*Alberto Sardella (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina),  
Gabriella Martino (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina),  
Maria C. Quattropiani (Dipartimento di Scienze della Formazione, Università di Catania)*

The investigation of emotional processes in elderly subjects has been a topic of increasing interest, since the elderly tend to manage their emotion responses peculiarly. A systematic search was conducted on the principal electronic scientific databases. In compliance with inclusion and exclusion criteria, 44 articles were included. Elderly subjects reported a higher use of adaptive ER strategies, as well as fewer difficulties in ER, compared to younger adults, which suggests a higher efficiency in regulating their emotional responses. The use of maladaptive ER strategies can expose elderly subjects to increased risk of exacerbating psychological distress, as well as to the occurrence of negative disease-related outcomes, when clinical samples are considered. Understanding the uniqueness of their ER processes might contribute to enrich the clinical assessment of elderly subjects, and to implement tailored interventions with the purpose to reinforce adaptive ER processes, and to promote a better adaptation to age-related negative events. In this context, the association of ER and medical conditions in elderly still appears a partially met need; further studies are needed to deepen the contribution of ER in the adaptation to age-related comorbidities.

## EMOTION REGULATION ACROSS LIFE CONTEXTS

*Proponente: Patrizia Velotti (Sapienza Università di Roma)*

Research conducted in the last decades suggested that Emotion Regulation (ER) is a transdiagnostic construct as well as a therapeutic target across most of the psychotherapeutic approaches (e.g. Aldao et al., 2016). However, the investigation of its role in psychological and psychological functioning is still growing with several studies demonstrating its potential in understanding well-being in life-contexts and in extending previous psychopathological models. In addition, literature highlights the need for measures able to assess the diverse dimensions of the construct. This panel aims to present several Italian contributions that illustrate the illuminating role of emotion regulation across different contexts. The contribution from the University of Cagliari investigates how ER interplays in creative activities. The study from the University of Palermo illustrates the central role of ER and intolerance of uncertainty in predicting distress during the COVID-19 pandemic. The study from the University of Rome, presents a new tool, the DDY, that allows to assess dyadic emotion dysregulation. The contribution from the University of Genoa explores the relationship between emotion regulation and metacognitive functioning in behavioral addiction.

## INVESTIGATION THE RELATIONSHIP BETWEEN CREATIVE ACTIVITIES, PERSONALITY DIMENSIONS AND EMOTION REGULATION

*Stefania Cataudella (Università di Cagliari), Alessandra Busonera (Università di Cagliari), Stella Conte (Università di Cagliari)*

There is a growing interest in the impact that the artistic creativity can have on mental health (Fancourt & Steptoe, 2018). A rich literature has shown affective benefits of engaging in creative activities such as making music, writing, dancing and crafts (Fancourt, 2017; Oshrit, 2017). This study examined the relationship between creative activities, personality dimensions, emotion regulation and wellbeing. 276 subjects completed questionnaires which were used to assess the variables of interest: 172 practiced some artistic activity (G1), 104 did not practice any artistic activity (G2). From the comparisons G1 vs G2, statistically significant differences emerged with respect to emotional dysregulation and personality dimensions. Regarding the emotional dysregulation (DERS), the independent-sample t-test procedure returned a statistically significant difference in the Goals dimension ( $G1 < G2; t = 2.09; p = .04$ ). Regarding the personality (BFI), a statistically significant difference emerged in: Extraversion ( $G1 > G2; t = -2.01; p = .05$ ); Agreeableness ( $G1 > G2; t = -2.36; p = .02$ ); Openness ( $G1 > G2; t = -9.99; p < .001$ ). The results provide a better understanding of how artistic creative activities can support the design of interventions to enhance the regulation of emotions and mental health.

## EMOTION REGULATION STRATEGIES AND INTOLERANCE OF UNCERTAINTY AS PREDICTORS OF INDIVIDUAL PSYCHOLOGICAL DISTRESS DUE TO THE COVID-19 PANDEMIC

*Gianluca Lo Coco (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Laura Salerno (Università degli Studi di Palermo), Silvia Salcuni (Università degli Studi di Padova), Salvatore Gullo (Università degli Studi di Palermo), Cecilia Giordano (Università degli Studi di Palermo), Gaia Albano (Università degli Studi di Palermo), Omar Gelo (Università del Salento), Gloria Lagetto (Università del Salento), Maria Di Blasi (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo)*

Previous research suggested that psychological responses to the COVID-19 pandemic are not homogenous across individuals. The current study aims: a) to identify subgroups of individuals with different trajectories of psychological distress (depression, anxiety and stress) during the pandemic; and b) to identify risk factors for psychological distress trajectories. 3,931 participants were recruited online and completed measures of psychological distress (DASS-21), emotion regulation (ERQ), and intolerance of uncertainty (IUS-12) in a 4-wave panel. Latent Class Growth Analysis was used to derive trajectories of distress over time. Findings suggested heterogeneity in participants' responses to the pandemic with 4 different classes: a low-resilient group with low baseline levels of distress and a decreasing trend; a vulnerable group with moderate baseline distress and an increasing trend; a high-decreasing group with high baseline distress but decreasing trend; and high-chronic group with high stable distress over time. Females, young adult participants, and individuals with low ERQ-reappraisal and high intolerance of uncertainty had higher odds to be classified into the vulnerable or chronic groups.

## DOES EMOTION REGULATION MEDIATE THE RELATIONSHIP BETWEEN METACOGNITIVE FUNCTIONING AND INTERPERSONAL PROBLEMS?

*Guyonne Rogier (Dipartimento di Scienze della Formazione, Università di Genova), Gerardo Anconetani (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Alice Bazzuro (Dipartimento di Scienze della Formazione, Università di Genova), Giulia Ballarotto (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Preliminary contributions indicate that emotion regulation may be a useful framework to explain the role of metacognitive functioning in interpersonal problems. However, the interplay between these variables has not yet been empirically investigated. To bridge such gap, we recruited patients with psychiatric diagnoses and healthy controls. Participants completed the Emotion Regulation Questionnaire and the Interpersonal Problems Inventory-47 and were administered the Indiana Psychiatric Illness Interview. Metacognitive capacity was assessed using the Metacognition Assessment Scale-Abbreviated. Compared to controls, individuals with psychiatric disorders showed lower levels of metacognition and emotion regulation and higher levels of interpersonal problems. Both metacognitive functioning and interpersonal problems were significantly related to emotion regulation capacities. The structural equation model found that emotion regulation partially mediated the relationship between metacognitive functioning and interpersonal problems. Emotion regulation appears to be a central construct in the explanation of how metacognitive functioning may lead to interpersonal problems.

## THE DERS DYADIC: A SELF REPORT TOOL FOR THE ASSESSMENT OF THE DYADIC FACETS OF EMOTIONAL DYSREGULATION

*Patrizia Velotti (Sapienza Università di Roma), Filippo Faccini (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Luca Marchegiani (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Roberta Gabriella Cavalli (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

The dimensions of emotion dysregulation are traditionally measured as intrapersonal variables despite several contributions highlighted that these develop within interpersonal contexts and that some remain at least partially negotiated within relationships. Emotion dysregulation accounts for interpersonal functioning, including dynamics of romantic relationships. However, the advances in the understanding of dyadic emotion dysregulation are limited by the lack of measurement tools. To bridge such gap, we developed a self-report questionnaire, the DDY (Ders Dyadic), adapting some items of the Difficulties in Emotion Regulation Scale, to the dyadic context. We administered the tool to a sample of adults (N=867) as well as the DERS, the Difficulties in the Regulation of Positive Emotions Scale, the Emotional Beliefs Questionnaire, and the Emotion Regulation Questionnaire. Exploratory Factorial Analysis led to a two-factors solution namely Awareness and Clarity and configural invariance across gender was met. Internal consistencies of the DDY subscales were high. The correlations between the DDY and the other measures demonstrated its construct validity. The promising nature of these results is discussed in light of the potential clinical and empirical uses of the DDY.

## FROM STRESS AND EMOTION DYSREGULATION TO EATING COMPULSIVITY THROUGH EMOTIONAL EATING: THE MODERATING ROLE OF FOOD ADDICTION

*Alessandro Alberto Rossi (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Stefania Mannarini (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

Stressful (PS) situations and/or negative (dysregulated) emotional states (EDR) often leads individuals to engage in maladaptive behaviors such as emotional eating (EE) - which could lead to compulsive eating (EC) behaviors. However, a key variable of this process (food addiction; FA) does not seem to have been sufficiently considered. This study aimed to test a moderated path model in which FA moderated the relationship between PS, EDR, and EC through EE. Individuals [ $n = 237$ ; 89 M and 148 F (Mage = 43.07, SD = 12.47); BMI from 38.93 to 47.75 (M = 42.32, SD = 5.81)] were tested with the Perceived Stress Scale (PSS), the Difficulties in Emotion Regulation Scale, Short Form (DERS-SF), the Emotional Eating Scale (EES), the Measure of Eating Compulsivity (MEC), and the modified Yale Food Addiction Scale2.0 (mYFAS2.0). A moderated mediation analysis was performed. The relationships between PS ( $p < .001$ ), EDR ( $p < .001$ ), and EC were fully mediated by EE ( $p < .001$ ). Moreover, this relationship was moderated by FA ( $p < .001$ ). These results underline the role of FA within the process that leads to EC starting from PS and EDR through EE. Also, these findings underline the central significance of emotions – highlighting how clinicians could implement psychological interventions.



# LOOKING AT THE TREATMENT FROM THE THERAPISTS INTERNAL WORLD: NEW DIRECTIONS IN RESEARCH ON REFLECTIONS AND EXPERIENCES OF THERAPISTS

*Proponente: Guido Giovanardi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

In psychotherapy research, the investigation of therapists experiences has a long tradition. Many authors have investigated countertransference and affective processes of therapists in therapeutic process in relation to several patients' population. Their experiences within training and supervision, their within-session reactions, and their views on process and outcome. The goal of this symposium, which is part of this line of research, is to bring together some original research on therapists perspectives, investigating aspects that are under-reported in the literature. Giovanardi et al. present a qualitative study on the countertransferential experiences of therapists of different orientations in the encounter with transgender and non-binary patients. The second contribution, by Boldrini et al., proposes a qualitative investigation on therapists conceptions of patients' autonomy and directiveness of their interventions. Mariani et al. focus on therapists clinical notes to investigate the processes of free-association and free-floating attention. Finally, Scalabrini & Mucci propose a neuroscientifically informed model of psychotherapy based on attention to transferential and countertransferential dynamics.

## DIRECTIVE OR NEUTRAL PSYCHOTHERAPY? A QUALITATIVE RESEARCH ON CLINICIANS' BELIEVES AND INTERVENTIONS REGARDING PATIENTS' PERSONAL AUTONOMY

*Tommaso Boldrini (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Sara Di Martino (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Teresa Soldati (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Miranda Boldrini (AutonomiCap - Université Saint-Louis Bruxelles, Belgium)*

The definition of patient personal autonomy and its violations in clinical practice is understudied and relatively absent topics in professional codes of ethics. This multidisciplinary research (clinical psychology and moral philosophy) aims to investigate the role of the psychotherapist and his interventions regarding patient autonomy. A semi-structured interview was constructed, exploring: episodes in which clinicians took a directive position; whether clinicians considered such interventions in continuity with their theoretical models, and; clinicians' opinions on the topic of autonomy. Interviews' transcripts have been analyzed with Consensual Qualitative Research method. 45 psychotherapists were interviewed (mean age = 41.8). Several themes emerged, and psychodynamic therapists seems to show a moral dilemma related to maintaining a position of neutrality and a need to assume paternalistic attitudes (which are common and egosyntonic among cognitive behavioral therapists) in extreme circumstances. Results are discussed according to the main orientations of moral philosophy on the concept of personal autonomy (internalist, externalist, expressivist), referring to their declinations in the field of bioethics and medical ethics.

## COUNTERTRANSFERENTIAL REACTIONS WITH TRANSGENDER AND NON-BINARY PATIENTS: A QUALITATIVE ENQUIRY AMONG CLINICIANS WITH DIFFERENT THEORETICAL ORIENTATIONS

*Guido Giovanardi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Marta Mirabella (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Alexandro Fortunato (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Bianca Di Giannantonio (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Degli Angeli Serena (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Karine Milanese (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Anna Maria Speranza (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

**Aim:** Recent literature highlighted the challenges encountered at countertransferential level by many therapists working with transgender and non-binary (TNB) patients. The reactions, ranging from regulatory anxiety to unconditional acceptance, seem to undermine the working alliance and patients trust in the therapeutic relationship. However, research on this aspect is still scarce. The aim of this study is to explore the countertransferential reactions of Italian psychotherapists of different orientations when encountering these patients. **Methods:** The sample consists of 20 psychotherapists with dynamic, cognitive and systemic orientations. Consensual Qualitative Research (CQR) was applied to transcripts of a semi-structured interview created ad hoc. **Results:** Several themes emerged: 1) Strong countertransferential reactions regarding gender transitions; 2) Therapists opinions and knowledge about the concepts of gender identity and gender incongruence; 3) Developing trust in the therapeutic relationship with TNB patients. **Discussion:** The results highlight the presence of intense and poorly processed countertransferential reactions. The importance of updating training curricula to enhance the effectiveness of psychotherapies with people presenting these conditions is discussed.

## FREE FLOATING ATTENTION AND FREE ASSOCIATIONS FROM THE THERAPISTS POINT OF VIEW: REFLECTIVE LISTENING AND THE QUALITY OF THE THERAPEUTIC SESSION

*Rachele Mariani (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Cinzia Di Monte (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Tiziana Bastianini (Società Psicoanalitica Italiana - Associazione Internazionale di Psicoanalisi), Anna Ferruta (Società Psicoanalitica Italiana), Benedetta Guerrini degli Innocenti (Società Psicoanalitica Italiana), Christopher Christian (Department of Psychology, City College, City University of New York)*

Starting from Freud's (1912) definition of free association and free-floating attention: "Just as the receiver converts back into sound waves the electric oscillations in the telephone line which were set up by sound waves, so the doctors unconscious is able, to reconstruct that unconscious, which has determined the patients free associations"; our aim is to investigate how the quality of the therapists empathic and reflective listening can influence the quality of the session. To investigate this, we will use a new tool, the Free-Association and Free-Floating Attention Scale (FASS), designed to assess the therapists internal perception of the session process. 50 session clinical notes scored by RP linguistic measures (Bucci, Maskit & Sean, 2012) and clinical evaluation by experienced psychoanalysts using: FASS, socio-demographic information, and the Session Evaluation Questionnaire (SEQ-Stiles et al, 2002). The results highlight how an increase in the free associative process in the session and a greater capacity of the therapist to listen to the internal flow of his thoughts are related to a better evaluation of the session. Furthermore, the linguistic measures highlight specific patterns, in which the therapist shows greater difficulty in reflective listening.

## INTERSUBJECTIVITY, SELF, COUNTERTRANSFERENCE AND BEYOND

*Andrea Scalabrini (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Clara Mucci (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Nowadays different from the Freudian concept of trauma and repression, it is clear how the self comes from the other and how traumatic experiences together with dissociative processes leave traces in the self and the brain (Mucci 2021; Schore 2003; Scalabrini, Mucci, Northoff 2018). The effect of traumatic experience might result in dissociation at different levels (Scalabrini et al., 2020; Mucci & Scalabrini 2021). In this regard our restless brain is characterized by its own spontaneous activity that contains the information's related to the self and its conscious-unconscious-processual memory. Thus, when the basis of our self is disrupted non-integration of internal and external stimuli might occur threatening both the sense of subjectivity and intersubjectivity. Working at the edges of different affective- and self-states, the primary purpose of the therapist is to reach and integrate client's' dissociated layers of the self with their respective affects and thoughts (Mucci & Scalabrini 2021; Northoff & Scalabrini 2021). Here we propose a neuroscientifically informed form of psychodynamic psychotherapy that working continuously with transference-countertransference dynamics allow for a re-organization of the self and its body-brain-mind system.

# NEW INSIGHTS INTO CLINICAL AND SUBCLINICAL MANIFESTATIONS OF BORDERLINE PERSONALITY DISORDER

*Proponente: Emanuele Preti (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

In recent years, assessment and conceptualization of Borderline Personality Disorder (BPD) and clinical processes and outcomes related to this condition gained new research attention, also in light of the new approaches proposed by the DSM-5 and the ICD-11. The present symposium brings together research focusing on dimensional approaches to personality pathology, clinical outcomes associated with these conditions, and their underlying social-cognitive processes. The first contribution (Somma, Galdi, Borroni, Fossati) focuses on the opportunities offered by dimensional models of personality pathology in reconceptualizing BPD. The second contribution (Tanzilli, Fiorentino, Gualco) uses the PDM-2 framework to provide an empirically valid and clinically rich portrait of BPD adolescent patients. The third contribution (Turolla, Preti, Romano, Lopez-Castroman, Zimmermann, Madeddu, Courtet, Calati) presents a systematic review and meta-analysis on the relationship between each BPD symptom and suicide-related outcomes in individuals without a BPD diagnosis. The fourth contribution (Di Pierro, Di Sarno) investigates the associations between BPD features, trait rejection sensitivity and state perceived rejection, and affective reactions to rejection in daily life.

## RECONCEPTUALIZING BORDERLINE PERSONALITY DISORDER FROM THE PERSPECTIVE OF THE ALTERNATIVE MODEL OF PERSONALITY DISORDER

*Antonella Somma (Facoltà di Psicologia, Università Vita-Salute San Raffaele Milano), Giulia Gialdi (Università Vita-Salute San Raffaele Milano), Serena Borroni (Università Vita-Salute San Raffaele Milano), Andrea Fossati (Università Vita-Salute San Raffaele Milano)*

Section III of the DSM-5 provided an Alternative Model of Personality Disorder (AMPD), along with traditional personality disorder (PD) diagnoses listed in Section II. Borderline personality disorder (BPD) is among the subset of PDs that were retained in the AMPD, and a Borderline pattern qualifier has been included in the ICD-11. Thus, BPD may represent a nexus for debates about the usefulness of dimensional models of personality. The aim of the present study was to investigate the opportunities offered by dimensional models of personality pathology in reconceptualizing BPD. We recruited a sample of 240 clinical participants (64.7% female), who were consecutively admitted to the Clinical Psychology and Psychotherapy Unit of San Raffaele Hospital, Milan, Italy. Participants were administered the Schedule for Nonadaptive and Adaptive Personality–Second Edition, Personality Inventory for DSM-5, Personality Inventory for ICD-11, Big Five Inventory, Five Factor Model Rating Form, Level of Personality Functioning Scale–Brief Form, and Level of Personality Functioning Scale–Self-Report. Multivariate analysis showed the usefulness of the AMPD in providing a deeper understanding of BPD and suggested the clinical usefulness of adopting a dimensional approach to the study of BPD.

## ASSESSING BORDERLINE PERSONALITY DISORDER IN ADOLESCENCE ACCORDING TO THE PSYCHODYNAMIC DIAGNOSTIC MANUAL-2 (PDM-2) CLINICAL FRAMEWORK

*Annalisa Tanzilli (Sapienza Università di Roma), Flavia Fiorentino (Sapienza Università di Roma), Ivan Gualco (Centro Studi della Terapia della Coppia e del Singolo, Genova)*

Assessing borderline personality disorder (BPD) in adolescence is very difficult due to its high symptom heterogeneity and severity. This study aimed to provide an empirically valid and clinically rich portrait of BPD identifying specific subtypes in borderline adolescent patients according to the PDM-2 framework. Fifty clinicians completed the Psychodiagnostic Chart-Adolescents of the PDM and the Therapist Response Questionnaire-Adolescents. Patients filled in the Defense Mechanisms Rating Scales-Self-Report-30. Three emerging personality profiles were identified. The emotionally dysregulated subtype, characterized by the strong use of splitting, projective identification, acting, was positively related to angry/criticized and disorganized therapist responses. The impulsive-histrionic subtype, characterized by disavowal and minor image-distorting defenses, acting, was positively related to angry/criticized and sexualized therapist responses. The dependent-victimized subtype, characterized by depressive defenses, was negatively related to overinvolved/worried therapist response. A more differentiated view of BPD may have relevant treatment implications and may help plan individualized and effective interventions in adolescence.



## SUICIDE-RELATED OUTCOMES AND BORDERLINE SYMPTOMS IN SUBJECTS WITHOUT A BPD DIAGNOSIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

*Federica Turolla (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Emanuele Preti (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Daniele Romano (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Jorge Lopez-Castroman (Department of Psychiatry, Nimes University Hospital, France), Johannes Zimmermann (Department of Psychology, University of Kassel, Germany), Fabio Madeddu (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Philippe Courtet (Institute of Functional Genomics, CNRS-INSERM, France), Raffaella Calati (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

Although suicidal behavior has been widely investigated in Borderline Personality Disorder (BPD), there is a lack of evidence on the specific contribution of each BPD symptom in suicidal risk. Thus, we performed a systematic review and meta-analysis on the relationship between each symptom (except criterion 5) and suicide-related outcomes in subjects without a BPD diagnosis. We searched on PubMed/MEDLINE, SCOPUS, Web of Science, Embase, PsycINFO, CINHALL and Cochrane Library databases from 1974 until June 2021. Authors of eligible studies were contacted. We obtained data from 11 studies that report measurements of BPD symptoms and Suicidal Ideation (SI), Non-Suicidal Self-Injury (NSSI) and Suicide Attempt (SA). Unstable self-image and Chronic Emptiness were associated with SI (k=6), NSSI (k=5) and SA (k=10). Impulsivity was associated with SA. Affective instability and Paranoid ideation or dissociative symptoms were associated with SI. No association was found for Frantic efforts to avoid abandonment, Unstable interpersonal relationships, and Inappropriate intense anger. In the assessment of suicidal risk, such symptoms should be considered, even in patients who do not fulfill the BPD diagnosis. A larger and more homogeneous sample is desirable for further research.

## WHAT IF I FEEL REJECTED? BORDERLINE PERSONALITY AND DAILY LIFE EXPERIENCES OF SOCIAL REJECTION

*Rossella Di Pierro (Università degli Studi di Milano-Bicocca), Marco Di Sarno (Università degli Studi di Milano-Bicocca)*

This contribution aims at deepening our understanding of social rejection in borderline personality. We investigated whether and how borderline personality relates to trait rejection sensitivity and state perceived rejection. Moreover, we examined the effects of borderline personality on affective reactions to experiences of social rejection in daily life. To clarify the specificities of borderline-related outcomes of social rejection, we also inspected similarities and differences between borderline personality and vulnerable narcissism. Community adults (N = 189) completed baseline measures of rejection sensitivity, borderline personality, and vulnerable narcissism, and daily measures of perceived social rejection and affective states for one week. Both borderline personality and vulnerable narcissism were associated with anticipated negative emotions for rejection. Unlike vulnerable narcissism, however, only borderline personality made people prone to feeling socially rejected by others in daily life and to experiencing greater self-directed aggressive impulses when feeling socially rejected. These findings confirm that sensitivity to social rejection is crucial in borderline personality and provide a deeper understanding of its consequences in daily life.

## **SUFFERING AND HEALING WITH BODY AND MIND: TOP-DOWN AND BOTTOM-UP INTEGRATION TO INVESTIGATE PSYCHOLOGICAL DISTRESS AND ITS MODIFICATIONS**

*Proponente: Francesca Malandrone (Dipartimento di Scienze Cliniche e Biologiche, Università degli Studi di Torino)*

A vast body of literature relates mind and body with different perspectives on the same issues: how we suffer and how we can recover. This symposium fits in by offering studies that suggest novel approaches. Two contributions consider Brain-Heart Interplay, a novel paradigm that explores the communicative flow between the Central Nervous System and the Autonomic Nervous System, to characterize Post-Traumatic Stress Disorder (PTSD) and depression. In other words, by combining and observing top-down and bottom-up processes in the description of potential biomarkers and changes after psychotherapy. Another contribution on psychological therapies discusses the impact of a Mindfulness-Based Intervention (MBI) administered via telemedicine on persons with COVID-19. MBIs exploit bottom-up emotional regulation mechanisms and the contribution describes the improvements of anxiety, depression, and post-traumatic stress symptoms as well as the patients subjective emotional experience and the relationship between his expectations and beliefs. In this regard, one contribution highlights the benefits of a positive framing of side effects of an active placebo nasal spray that is described as having preventive capabilities against sadness, considering the related top-down processes.

## INFLUENCE OF A POSITIVE FRAMING OF SIDE EFFECTS OF AN ACTIVE PLACEBO ON MOOD

*Marcel Wihlelm (Department of Clinical Psychology and Psychotherapy, Philipps University of Marburg, Germany), Diletta Barbiani (Department of Clinical Psychology and Psychotherapy, Philipps University of Marburg, Marburg, Germany - Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Mirta Fiorio (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Winfried Rief (Department of Clinical Psychology and Psychotherapy, Philipps University of Marburg, Germany)*

Positive framing can counteract the negative effects of a crude description of side effects, for example by depicting side effects as signs that the treatment has started to work (i.e., onset sensations). This study examines whether a positive framing of side effects of an active placebo nasal spray passed off as having protective properties against sadness can boost the placebo response of the nasal spray and decrease the burden of specific side effects. Ninety-six healthy participants will be randomized to three different groups: Group 1 will be informed about the potential side effects of the nasal spray through a positive framing; Group 2 will receive the same information though without positive framing; a no treatment control group will not receive the active placebo nasal spray. Subsequently, all participants will be confronted with self-referential statements inducing negative mood (Velten method) accompanied by sad background music. After 6h, participants will be re-exposed to a sadness induction session online, to test for potential long-lasting effects. We hypothesize that Group 1 will experience a lesser burden of side effects and fewer feelings of sadness following both sadness induction protocols due to positive framing and expectancy-induced placebo effects

## MODULATION OF BRAIN-HEART INTERPLAY IN BREAST CANCER PATIENTS WITH POST-TRAUMATIC STRESS DISORDER: A TRAUMA-FOCUSED PSYCHOTHERAPY VS. SUPPORTIVE THERAPY STUDY

*Francesca Malandrone (Dipartimento di Scienze Cliniche e Biologiche, Università degli Studi di Torino)*

Breast cancer (BC) entails significant psychological consequences, including Post-Traumatic Stress Disorder (PTSD) in up to 32% of patients. The emotional aspects can be investigated considering the role of the functional brain-heart interplay (BHI) that provides information on the functional interplay between EEG and sympathovagal dynamics. To the best of our knowledge, this is the first study investigating the extent of change in functional directional BHI after a trauma-focused psychotherapy (EMDR) compared with supportive therapy (TAU) in PTSD. A statistically significant higher coupling, in the direction going from-heart-to-brain, in patients treated with EMDR than in TAU controls, was found after the treatment. These results are consistent with the linear correlation with clinical data, showing an improvement of PTSD symptoms with the increase of functional BHI after EMDR only. Trauma-focused psychotherapy seems to be effective in changing and improving the communication flow in the bottom-up direction - from heart to brain -, reducing the top-down central control responsible for the PTSD symptoms.

## ALTERED BRAIN-HEART INTERPLAY AS A NEUROPHYSIOLOGICAL MARKER OF SUBCLINICAL DEPRESSION

*Elisabetta Patron (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Francesca Mura (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Padua Neuroscience Center, Università degli Studi di Padova), Vincenzo Catrambone (Dipartimento di Ingegneria dell'Informazione, Università di Pisa), Gaetano Valenza (Dipartimento di Ingegneria dell'Informazione, Università di Pisa), Claudio Gentili (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Padua Neuroscience Center, Università degli Studi di Padova)*

Subclinical depression is a common mood disorder characterized by emotional and cognitive disturbances. The literature failed to provide consistent support for a specific biomarker of depression. Converging results from studies in psychopathology and neurocardiology showed how depression is linked to structural and functional alteration in various brain areas as well as autonomic dysfunction, such as a scarce cardiac vagal tone. Most recently, evidence suggests that Brain–Heart Interplay (BHI), a composite index reflecting autonomic and central nervous system activity, could be a more sensitive biomarker for depression. BHI reflects the bidirectional link between cardiac autonomic and central nervous systems. Studies on BHI in individuals with depressive symptoms in resting conditions and during emotional tasks support the hypothesis of an altered cardiac-cortical interplay. Specifically, results showed that depressed individuals in resting conditions had an overdrive of the functional neural control on heartbeat regulation, while during an emotional task, altered from-heart-to-brain interplay emerged when depressed individuals viewed negative valenced images. These findings are of relevance for a better understanding of the psychophysiological mechanisms underlying depression.

## A SHORT MINDFULNESS INTERVENTION IN TELEMEDICINE IN SEVERE POST-COVID-19 PATIENTS

*Eleonora Volpato (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore - IRCCS Fondazione Don Carlo Gnocchi, Milano)*

The present pilot randomised controlled trial compared the impact of a Mindfulness-based brief intervention conducted in telemedicine (n = 20) for a period of 5-6 sessions of 45 minutes each, for a total commitment of 3 weeks, to a wait-list control (n = 20), involving people who have been previously tested positive for COVID-19, admitted to intensive care or reanimation and subsequently in respiratory rehabilitation following negativization. The General Anxiety Disorder (GAD-7), Patient Health Questionnaire (PHQ-9), Impact of Event Scale (IES), Perceived Stress Scale (PSS), State Shame and Guilt Scale-8, Peritraumatic Perceptions of Fear and life threat, Psychological General Well-being Index (PGWBI), respiratory functions, oxygen saturation, haemogasanalysis were detected at baseline, 3 weeks, and 3 months. Semi-structured interviews conducted according to the Interpretative Phenomenological Analysis (IPA) approach detected the participants emotional experiences, expectations, and beliefs about their experience of illness. This study showed the potential of an affordable and widely accessible Mindfulness-based brief intervention in clinical practice, offering a view of hospital-territory continuity following the acute phase of COVID-19 disease.

## TRAUMA AND PSYCHOPATHOLOGY: AN INTEGRATIVE PERSPECTIVE

*Proponente: Lucia Sideli (Lumsa Università di Roma)*

Childhood trauma and life events are known risk factors for a variety of psychopathological outcomes. Psychological mechanisms through which traumatic experiences affect mental health include emotion dysregulation, dissociation, and altered cognitive processes, including emotion recognition and attributional processes. The growing understanding of these processes will contribute to improve the care of people exposed to traumatic experiences. Within a multidisciplinary framework, this symposium aims to explore trauma and dissociation in relatively understudied conditions, such as COVID-19 lockdown and obsessive compulsive disorder. Psychopathological pathways linking childhood maltreatment, dissociation, emotion processing, and post-traumatic stress symptoms will be presented. The symposium will also address the protective and therapeutical factors related to coping with traumatic experiences. The 'working through' and curative function of dreaming will be discussed. Furthermore, recent neurobiological evidence on the efficacy of psychodynamic therapy on children suffering from complex trauma will be discussed.



## IN THE MIND OF THE ANALYST: THE TRAUMATOPHYLIC FUNCTION OF DREAMS

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Since the beginning of psychoanalysis, dreams have been considered a core element in the understanding of the unconscious life. Ferenczi postulated that dreams have a 'traumatophylic function' which allow to symbolize and re-integrate dissociated contents related to daily traumatic experiences. To test this hypothesis, we longitudinally collected dreams of 5 Italian psychoanalytic psychotherapists/psychoanalysts (N=1.278) during different COVID-19 waves. Lexical Correspondence Analysis was performed using T-LAB to investigate their subjective experience. Two main latent Dimensions of Meaning (DM) were found: 1) inside/outside dynamic; 2) concrete and psychic paralysis/movement. Analyses show that the content changes following pandemic waves. While pandemic dreams reflect the tendency to overcome the shock of the virus outbreak isolating themselves and/or searching the proximity and the help of others; post-pandemic dreams reflect a sort of unconscious processing of the trauma's consequences (e.g., vulnerability and helplessness, lack of thinking, passivity). Results support the Ferenczian idea that 'day's and life residues' in dreams are 'an attempt at better mastery and settling of traumatic experiences' suggesting that dreaming is -in itself- a working-through process.

## INVESTIGATING SYMPTOMS OF SECONDARY TRAUMATIZATION IN EDUCATORS TAKING CARE OF CHILDREN WITH HISTORY OF TRAUMATIC EXPERIENCES

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Adults in charge of children with histories of traumatic experiences are at higher risk to experience symptoms of Job Burnout (JB) and Secondary Traumatization (ST). The possibility to identify the emergence of JB and ST, and to intervene preventively represents an important resource and can help to prevent the experience of Parental Burnout (PB), a condition that could further detriment caregiving practices. The study aimed to investigate the presence of symptoms of JB, ST and of PB in professional caregivers working with maltreated children. Twelve professional educators (Mage=30.2yrs SD=7.26), working in a residential community that offers care to maltreated children aged 0-5 yrs, were administered the ProQL scale (Figley, 2013; Stamm & Com, 2010) to assess JB and ST, and the PBA (Roskam et al., 2018; Miscioscia et al., 2018) to assess PB. The results highlighted the presence of moderate JB (25%) and ST (17%). JB was associated to lower personal realization ( $r=-.743$ ,  $p=.035$ ), whereas ST correlated with higher exhaustion in caregiving role with respect to PB ( $r=.809$ ,  $p=.015$ ). Implications for clinical practice and organizational policies are presented.

## AFFECT MISATTRIBUTION DERIVING FROM CHILD MALTREATMENT AND DISSOCIATION: PRELIMINARY FINDINGS

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Child maltreatment is a relevant risk factor for dissociation and psychopathology. However, implicit mental processes in child maltreatment research received scant attention. In this study, we used an Affect Misattribution Procedure (AMP) to investigate implicit preference towards priming images depicting happy or maltreated children. Thirty-two community adults (22 females, 68.8%) ranging in age from 20 to 45 years old ( $M=26.66$ ;  $SD=5.14$ ) were administered the AMP and self-report measures assessing child maltreatment and dissociation. Bayesian analyses showed that childhood maltreatment and dissociation scores were positively associated with errors (positive responses toward maltreatment primes and negative responses toward figures of happy children) and with latency in responses. These preliminary findings might be relevant for understanding failures in metaconsciousness and hyperassociativity in some maltreated individuals. Also, they claim for further research that can unveil psychopathological distortions in cognitive processes deriving from child abuse and neglect.

## OBSESSIVE COMPULSIVE SYMPTOMS AND DISSOCIATIVE EXPERIENCES IN NON-CLINICAL AND CLINICAL SAMPLES: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Dissociation and traumatic events are associated with several mental health outcomes, however the association with obsessive compulsive symptoms (OCS) and disorder (OCD) is still unclear. A systematic search was carried out in biomedical databases from inception to January 2022 according to PRISMA guidelines. Forty-one studies met inclusion criteria (n = 9438, 38.4% male). The pooled prevalence of dissociative disorders in OCD was 8%. Two studies found that the prevalence of OCD among people with dissociative disorders was 17-32%. Case control studies suggested a moderate association between dissociative experiences and OCD ( $g = .67$ , 95% CI [.18, 1.16],  $k = 9$ ). Furthermore, dissociative experiences positively correlated with OCS ( $r = .43$ , 95% CI [.36, .51],  $k = 18$ ). The findings underline the role of dissociation and traumatic events in the pathogenesis of OCD and OCS. This suggests the importance of assessing dissociative experiences among patients with OCD and of targeting dissociation in the treatment of this clinical population.

## NEURAL PROCESSING OF EMOTIONS IN TRAUMATIZED CHILDREN TREATED WITH BRIEF PSYCHODYNAMIC THERAPY

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Complex trauma exerts a deleterious impact on children's abilities to recognize and regulate emotional states. Research has provided large evidence of the cerebral changes associated with emotion regulation improvement in maltreated children, after TF-CBT and EMDR. On the contrary, much less is known about the impact of psychodynamic therapy (PDT) on neural processing of emotions in children suffering from complex trauma. In this contribution, we illustrate the results of a study aimed at evaluating the effects of brief PDT on neural responses to adults facial emotions, in 10 school-aged children with histories of early and prolonged maltreatment. Children were examined before and within one month after the conclusion of brief PDT. High-density Electroencephalography (hd-EEG) was recorded while children passively viewing angry, afraid, happy, and neutral faces. Clinical scales were administered at the same times. After brief PDT, traumatized children showed increased activity in areas implicated in high-order cognitive processing and in facial emotion recognition. These changes were associated with the decrease of trauma-related symptoms and the improvement of behavioral/emotional functioning in children.

# AUTISM SPECTRUM DISORDERS: NEW CHALLENGES IN RESEARCH AND CLINICAL PRACTICE

*Proponente: Francesco Craig (Dipartimento di Culture, Educazione e Società, Università della Calabria)*

Since its first description, the definition of Autism has continuously evolved. Changes has pertained not only to the guidelines and diagnostic criteria, but also to the understanding of how Autism Spectrum Disorder is viewed in clinical, research, and sociological terms. In the last decade, research has progressively focus to clinical heterogeneity, arising new questions and challenges. Several key issues have emerged in relation to diagnostic criteria, early diagnosis, and intervention. Besides, discussions about Autism in socio-political terms have also increased, as exemplified by the ideas of neurodiversity, which refers to variation in the human brain and cognition within our species. In this symposium, these notions will be discussed in a multidisciplinary perspective, presenting recent findings in the field and focusing on how research results can inform and influence clinical practice, and vice versa. Moreover, we will focus on why such changes are welcomed, but at the same time they bring new challenges in research and clinical practice. Those changes also offer an insight into what might be further to come for the label of Autism.

## MOTOR FEATURES IN CHILDREN WITH AUTISM SPECTRUM DISORDER

*Alessandro Crippa (Istituto Scientifico Eugenio Medea)*

Although not included in the diagnostic criteria, motor atypicalities are highly prevalent in autism spectrum disorder (ASD). Based on a very recent analysis of the SPARK study database, 86.9% of children with ASD are at risk of a developmental coordination disorder throughout childhood and adolescence. A comprehensive meta-analytical approach demonstrated a significant overall deficit in gross motor skills in ASD, with a remarkable effect size of 1.04. Motor abilities are also strongly predictive of adaptive functioning and quality of life in ASD individuals, and, at least in some cases, they anticipate the socio-communicative difficulties. In this talk, I will show examples from my research program focused on decomposing heterogeneity in ASD through a multimethod investigation of the motor features within the spectrum. In particular, I will examine how this approach could have the potential to offer a more complete description of the behavioral presentation of ASD in girls and eventually identifying social-motor phenotypes in ASD. This data-driven approach may hold promise for recognizing ASD subtypes leading to more productive clinical studies, better etiological explorations, earlier detection, and broader therapeutic and rehabilitative windows.

## EYE MOVEMENTS AS A POSSIBLE EARLY MARKER FOR AUTISM SPECTRUM DISORDER

*Roberta Fadda (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Giuseppe Doneddu (Centro per l'Autismo e Disturbi Correlati, Cagliari), Noemi Limbardi (Centro per l'Autismo e Disturbi Correlati, Cagliari), Sara Congiu (Azienda Ospedaliera Brotzu, Cagliari)*

Besides the well-known reduced attention to human faces and eyes, the physical properties of the eye movements in infancy could be considered significant red flags for a possible diagnosis of ASD. Here we present an eye-tracking study in which we demonstrated higher levels of dispersion in the eye movements of preschool children with ASD compared to controls. Also, since research about early social abilities in infants may inform the development of new paradigms to detect individuals with ASD at an early age, we explored gaze following in preschool children with ASD compared to controls with an eye-tracking paradigm. In line with previous research, the results indicated intact gaze following in children with ASD. However, in response to a manipulation of the visual stimuli in which all the content of the image was hidden behind a blank barrier except for the face of a protagonist, we discovered that the eye movements of the participants with ASD jumped persistently from one point to another of the barrier. This is a rather atypical visual behavior since the human eyes tend to avoid focusing on a blank background. Our results point to the need to include eye-tracking measures for an early diagnosis of ASD.



## RECOGNITION OF EMOTIONAL BODILY EXPRESSIONS IN AUTISM SPECTRUM DISORDERS (ASD)

*Noemi Mazzoni (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia), Iuri Mastrandrea (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

Difficulties in recognising emotions in Autism Spectrum Disorders (ASD) have consistently been reported. Although evidence with facial expressions is extensive, recognition of emotional bodily expressions (EBE) in ASD is still underexplored. Moreover, little is known about this ability in individuals with ASD and intellectual disability (ID). In this talk, I will present a series of studies investigating EBE in children and adults with ASD, with and without ID. Overall, our results suggest that the difficulty in understanding EBE may rely on atypical processing of motion information, rather than emotion encoding, and that high level of cognitive resources can mediate the acquisition of compensatory mechanisms, which develop with age. Moreover, our findings show an opposite developmental trend in young children with and without ASD in visual preference for happy facial and bodily expressions. This suggest a cross-modal alteration in processing happy stimuli that is not limited to facial expressions but extends also to EBE. Finally, implications for treatment will be discussed.

## LONGITUDINAL PREDICTIVE ASSOCIATION BETWEEN CHILD-THERAPIST INTERACTION FEATURES AND RESPONSE TRAJECTORIES IN AUTISM SPECTRUM DISORDER (ASD) EARLY NATURALISTIC DEVELOPMENTAL BEHAVIORAL INTERVENTION (NDBI)

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Studying child-therapist interaction during ASD intervention may have both theoretical and clinical implications to understand the high interindividual variability in the response. This work investigated the predictive relationship between response to treatment and child-therapist interaction features. N=25 preschool children with ASD monitored for about 1 year of intervention. Response trajectories were evaluated by the Learning Rates. For each child, 4 sessions were annotated by an observational coding system (every 3 months). A set of quantitative features was automatically extracted and employed in a pipeline of linear model selection together with baseline variables. The baseline mental/chronological age ratio predicted a favorable outcome. Also interaction variables (proportion of exchanges interrupted by child withdrawals and degree of child-therapist behavioral reciprocity) predicted treatment response. The best model included the combination of the baseline variable and the changes in these interaction features during the first months of intervention. The evolution of child-therapist interaction dynamics seems to be relevant for ASD intervention and able to predict response over time. The first months seem to be crucial to promote interplay, especially self-regulation.

## NEURODIVERSITY: IS IT TIME FOR A PARADIGM SHIFT?

*Francesco Craig (Dipartimento di Culture, Educazione e Società, Università della Calabria), Marco Turi (Fondazione Stella Maris Mediterraneo), Flavia Tenuta (Dipartimento di Culture, Educazione e Società, Università della Calabria), Gianluca Mariano Colella (Dipartimento di Culture, Educazione e Società, Università della Calabria), Angela Costabile (Dipartimento di Culture, Educazione e Società, Università della Calabria)*

Autism spectrum disorder (ASD) is described as a categorical, neurodevelopmental disorder, which originates in early development. However, we are at a turning point in the field of autism science. The word neurodiversity refers to the diversity of all people, but it is often used in the context of ASD, as well as other neurodevelopmental conditions such as ADHD or learning disabilities. Neurodiversity refers to variations in the human brain and cognition, and it describes the idea that there is no one right way of thinking, learning, and behaving, and differences are not viewed as deficits. Conventional medical conceptualization has played and continues to play an important role in autism research and practice to date. Nonetheless, it is increasingly clear that if we wish to make progress for the benefit of the autistic and broader autism communities, it is necessary to re-evaluate our fundamentals. Starting from these premises, this contribution proposes to review and discuss the current concept and paradigm of neurodiversity and how it can provide new insights into practical and research-related implications of autism.

## CLINICAL PSYCHOLOGY FOR MEDICAL SETTINGS: NEW PERSPECTIVES

*Proponente: Federica Galli (Sapienza Università di Roma)*

Research in psychosomatic field is suggesting more and more the close link between medicine and psychology. Aim of the proposed symposium will be drawing new lines of clinical psychological work in medical settings. Research on different topic are planned: The symposium will open with the contribution of Nicolais and Carola describing data by the mean of the clinical experience at COVID-19 Intensive Care Unit of the Hospital S.Andrea (Rome). The study by Lai and Colleagues will describe data drawn by the field of bariatric surgery. Cosci (Firenze) will provide data on a new setting of clinical work: the systemic sclerosis. A further study by Cozzolino (Salerno) and Celia will describe new data on plasticity of human genome and immune system and implications for health and psychotherapy. - A further study by Galli and Gorini (Roma) will describe a new study in the area of psychocardiology (Takotsubo syndrome).

## BODY IMAGE AND BODY MASS INDEX INFLUENCES ON PSYCHOPHYSICAL WELL-BEING IN BARIATRIC PATIENTS

*Virginia Campedelli (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Chiara Ciacchella (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Giorgio Veneziani (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Giulia Rocchi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Gianfranco Silecchia (Dipartimento di Scienze Medico-Chirurgiche e Medicina Traslazionale, Sapienza Università di Roma), Carlo Lai (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Bariatric surgery is currently the gold standard for the treatment of morbid obesity, and it is important to explore which aspects may play an important role on psychological and physical wellbeing in individuals going through a bariatric path. The aim of this study was to assess the associations of body mass index (BMI) and dissatisfaction with body image with psychopathological aspects, feelings of hopelessness, and quality of life in patients undergoing evaluation for bariatric surgery. Participants completed a psychological clinical assessment before surgery. Correlations and multiple regressions were performed. Dissatisfaction with the perception of ones body image was strongly correlated with worse psychophysiological health. In contrast, BMI showed no significant correlation with the previous variables. Furthermore, the perception of ones own body image significantly predicted psychological health. The results of the present study showed a predominant role of body image over BMI in the association with psychological outcomes, suggesting the importance of considering body image in the assessment and treatment of obese patients requiring bariatric treatment.

## PSYCHOLOGICAL ALTERATIONS IN INTENSIVE CARE UNIT COVID-19 PATIENTS AND HEALTH CARE WORKERS

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Along with organic changes, psychological changes are detectable in patients with COVID-19. In these patients, the stressful experience of intensive care unit (ICU) hospitalization may also contribute to the worsening of psychological conditions. During the COVID-19 pandemic, ICU health care workers (HC) were exposed to a stressful situation that required more human resources than usual. Our study examines the short and long-term psychological consequences of COVID-19 in ICU patients. The psychological effects of caring for COVID-19 patients in ICU-HC workers were also studied. COVID-19 patients completed self-rating questionnaires (K10; PSS; IES-R, and PTGI) at 1 and 6 months after discharge. The same questionnaires were administered to the HC workers. Between 20% and 30% of patients showed moderate depressive/anxiety symptoms and perceived stress both one month and six months after discharge. Sleep problems, difficulty concentrating, confusion in placing events, and fear of reinfection (6-17%) were also observed in patients. At six months, only 7% of them showed PTSD symptoms, while 50% showed post-traumatic growth in the "Appreciation of life" subscale. A high percentage of HC workers (50-60%) showed depressive/anxiety symptoms, perceived stress, and PTSD symptoms.

## MENTAL PAIN AND SUFFERING IN SYSTEMIC SCLEROSIS: ARE THEY THE TWO FACES OF THE SAME MEDAL?

*Fiammetta Cosci (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Sara Ceccatelli (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Sara Romanazzo (Dipartimento di Medicina Sperimentale e Clinica, Università degli Studi di Firenze)*

Almost all states of ill health involve suffering, which can be measured as mental pain. Mental pain and suffering were assessed in 219 patients with systemic sclerosis to test whether (a) they are strongly correlated; (b) each one incrementally and independently contribute in explaining illness disability, psychological distress/well-being. Mental pain was assessed via the Mental Pain Questionnaire (MPQ), suffering was assessed via the Pictorial Representation of Illness and Self Measure (PRISM), illness disability was assessed via the Health Assessment Questionnaire Disability Index (HAQ DI), psychological distress was assessed via the Global Severity Index (GSI), wellbeing was assessed via the World Health Organization Five-Well-Being Index (WHO-5). Spearman correlation:  $\rho = -0.270$ ,  $p < .001$ . Hierarchical multiple regressions: HAQ DI (dependent variable): MPQ accounted for 12.7% of the variance, PRISM predicted an additional 8.6%. GSI (dependent variable): MPQ accounted for 31.3% of the variance, PRISM did not increase the model predictivity. WHO-5 (dependent variable): MPQ accounted for 20.2% of the variance, PRISM predicted an additional 4.5%. Mental pain and suffering are the two faces of the same medal being small in some cases the additional predictivity of PRISM.

## THE HIGH PLASTICITY OF HUMAN GENOME AND IMMUNE SYSTEM TO MIND-BODY INTERVENTIONS: NEW CHALLENGES AND IMPLICATIONS FOR HEALTH CONTEXTS

*Mauro Cozzolino (Dipartimento di Scienze Umane, Filosofiche e della Formazione, Università degli Studi di Salerno), Giovanna Celia (Dipartimento di Economia, Management e Territorio, Università degli Studi di Foggia)*

Currently microarray DNA technology has made it possible to measure thousands of gene expressions simultaneously. Furthermore, chronic diseases, stress and psychiatric disorders can be understood as multi-factorial interactions between genes and environment. These interactions involve a special class of genes, described as activity or experience-dependent genes, which can be turned on or off by signals from the physical and psychosocial environment. This study explores the hypothesis that a protocol “Mind-Body Transformation Therapy” (MBT-T), could modulate experience-dependent changes in gene expression in white blood cells of 18 non-clinical participants. Peripheral blood was collected just before, immediately after the MBT-T administration and 24 hours after. Changes in gene expression were assessed through microarray analysis. 200 genes were differentially expressed. Bioinformatic analysis revealed 4 significantly enriched pathways associated with reducing cellular stress and inflammation. This study seems underline that exists a straight communication between mind and gene especially when people live remarkable experience like MBT-T. This data demonstrated high plasticity of human genome to mind-body interventions and that has many implications for clinical psychology.



## PSYCHOLOGICAL CHARACTERISTICS OF PATIENTS WITH TAKOTSUBO SYNDROME AND PATIENTS WITH ACUTE CORONARY SYNDROME: AN EXPLORATIVE STUDY

*Federica Galli (Sapienza Università di Roma), Alessandra Gorini (Università degli Studi di Milano Statale)*

Takotsubo Syndrome (TTS) and Acute Coronary Syndrome (ACS) apparently share very similar clinical characteristics. Aim of the present explorative research was to investigate if post-recovery TTS and ACS patients present different psychological profiles. We also investigated whether the occurrence of acute psychological stressful episodes that had occurred prior to the cardiac event could be found in either syndrome. Twenty TTS and twenty ACS female patients were recruited. All patients completed self-report questionnaires about anxiety and depressive symptoms, perceived stress, type-D personality and post-traumatic symptoms. Results showed that only three subscales of health anxiety significantly differed between the two groups, while no differences were found in the other psychological measurements. Moreover, personality traits seem to not be associated with the impact of the cardiac traumatic event. Finally, only TTS patients reported the presence of a significant emotional trigger preceding the acute cardiac event. In conclusion, post-recovery TTS patients differed from ACS patients in their level of concern about their health and in their need of reassurance and information only, probably as a result of the different clinical characteristics of the two illnesses.

## FROM THE DESIRE TO THE COMPLEXITY OF BEING PARENTS

*Proponente: Alessandra Babore (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti)*

This symposium will focus on the complexity that characterizes the desire of becoming parent and the transition to parenthood in their multidimensional aspects. Specifically, the University of Chieti will present a study on couples undergoing assisted reproductive treatments, analysing the different emotional needs of males and females in the difficult condition of being infertile. University of Brescia will highlight the various correlates of maternal post-natal attachment to the baby, specifically considering the role of mothers' distress among somatic, obstetric, psychosocial and contextual factors. University of Bologna's team will discuss the topic of prematurity, showing the effects of a psychological support intervention for transition to parenthood during infant hospitalization in the Neonatal Intensive Care Unit. University of Milan will present the Parent Time online counselling, a service aimed to enhance parents in improving mentalization, personal and family well-being and positive relationship with their children. Overall, the aim of this symposium is to promote a reflection about factors supporting the complexity of becoming parent and attaining the parental role, also taking into consideration the impact of the COVID-19 pandemic.

## PERCEIVED DISTRESS AND MATERNAL POSTNATAL ATTACHMENT TO THE BABY BETWEEN 1 AND 6 MONTHS POSTPARTUM

*Anna Maria Della Vedova (Dipartimento di Scienze Cliniche e Sperimentali, Università di Brescia), Ylenia Tanghetti (Fondazione Poliambulanza Istituto Ospedaliero Brescia), Loredana Covolo (Dipartimento di Specialità Medico-Chirurgiche, Scienze Radiologiche e Sanità Pubblica, Università di Brescia)*

The attachment bond that parents develop towards their baby in the first months after birth is of great importance for adapting to the baby's needs and promoting his/her well-being and cognitive and emotional development. Literature shows that the quality of the mother-infant bond is influenced in a multidimensional way by many modifiable and non-modifiable factors. The aim of the study was to examine the role of perceived distress, among other maternal variables, with the aim of highlighting the factors associated with poor postnatal attachment through a multiple regression model. A sample of 543 mothers of infants between 1 and 6 months of age completed an anonymous questionnaire administered via an online platform including: a socio-demographic questionnaire also assessing psychosocial, obstetric, health and relational risk factors; the Maternal Postnatal Attachment Scale; the Matthey Generic Mood Questionnaire. The results show that the distress perceived by the woman is the most significant predictor for low postnatal attachment to the baby, followed by social support, obstetric and maternal health variables. These results highlight the multidimensionality of the mother-baby bonding, underlining the factors that can be modified through appropriate interventions.

## PARENTAL DISTRESS AND PERCEPTION OF AFFECTIVE QUALITIES OF HOSPITAL ENVIRONMENT: THE INFLUENCE OF A PICTORIAL HUMANIZATION IN A NEONATAL INTENSIVE CARE UNIT

*Erica Neri (Dipartimento di Psicologia, Università di Bologna), Alessandra Provera (Dipartimento di Psicologia, Università di Bologna), Marcello Stella (Pediatric and Neonatal Intensive Care Unit, Maurizio Bufalini Hospital, Cesena), Augusto Biasini (Donor Human Milk Bank Italian Association (AIBLUD)), Francesca Agostini (Dipartimento di Psicologia, Università di Bologna)*

Admission to Neonatal Intensive Care Unit (NICU) represents a stressful experience for parents, often exacerbated also by characteristics of hospital environment. Interventions aimed to improve qualities of health-care environment could be useful to support their emotional experience. Aim of the study was to evaluate if the implementation of a pictorial intervention could improve parental stress and affective perception of a NICU environment. 48 parents completed the “Rapid Stress Assessment Scale” (VRS) and the “Scales of the Affective Quality Attributed to Place” (QAL): 25 before (Control Group-CG) and 23 after (Index Group-IG) the pictorial intervention was performed. Results showed no significant differences between groups on parental distress. However, IG parents had significantly higher scores at Pleasant, Exciting and Arousing scales, and lower at distressing, unpleasant, gloomy and sleepy scales of QAL, suggesting an improved perception of environment. Moreover, higher levels of distress were predicted in case of CG and a perception of a low relaxing environment. Findings suggest that the pictorial intervention could be useful in making hospital environment more welcoming, reducing the negative affective perception in parents facing the distress of infant hospitalization.

## PARENT TIME: ONLINE COUNSELING SERVICE FOR PARENTS DURING COVID-19 PANDEMIC

*Cristina Riva Crugnola (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Marta Bottini (Università degli Studi di Milano-Bicocca), Elena Ierardi (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

COVID-19 pandemic has affected mental health involving a higher risk for vulnerable parents with increased depression, anxiety, and parenting stress in the perinatal period (Brown et al., 2020). Parent Time is a free online Counseling Service activated at University of Milano-Bicocca aimed at parents to support them during the transition to parenthood (pregnancy and first two years of the child's life), made even more complex by the current pandemic situation. The goal is to enhance parents in improving mentalization, personal and family well-being, and positive relationship with their children. 20 cases were followed, 30% of which were couple of parents. The main issues have been: difficulties in taking care of the child during the pandemic, anxiety and stress related to the new parent's role, relational difficulties with the partner in coparenting, difficulty in recognizing themselves in a positive parenting role, and relational difficulties with their own parents. In all cases parents expressed satisfaction with respect to the online meetings. Parent Time emerged helpful to provide support for parents that perceived distress and are in vulnerable family situations during pregnancy or first years of a child's life.

**“THE DIFFICULT PATH TOWARDS THE PARENTHOOD”:  
INFERTILITY STRESS AND QUALITY OF LIFE IN THE COUPLES  
UNDERGOING ASSISTED REPRODUCTIVE TECHNOLOGY (ART)  
TREATMENTS**

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Infertility stress, that is specifically related to the emotional burden generated by the inability to have children, may affect couple's personal, marital, and social life (Schmidt et al., 2005). The current study aimed to analyse the presence of differences on the quality of life, depression, anxiety and infertility stress according to sex and to investigate the complex relationship among the considered variables. Measures comprised the Fertility Quality of Life, the Depression Anxiety and Stress Scale, the Copenhagen Multi-Centre Psychosocial Infertility-Fertility Problem Stress Scales, and the Perceived Stress Scale. The sample included 103 participants (46 men and 57 women; mean age = 38.09, SD = 5.45) undergoing ART treatment. Findings showed significant gender differences on quality of life (subscales emotional, mind/body, social and total score), depression, fertility stress (personal domain), and perceived stress. Furthermore, results indicated that infertility stress mediated the relationship between emotional states (depression and anxiety) and quality of life. These data seem to underline that managing emotional stress, especially infertility-related stress, is an important aspect of fertility care considering the different emotional needs of women and men.

## HIGHER-ORDER COGNITIVE PROCESSES: NEW DIRECTIONS AND CLINICAL APPLICATIONS

*Proponente: Tommaso Boldrini (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Higher order cognition is composed of a range of sophisticated thought processes that have been extensively studied to understand the pathogenesis of mental disorders, the formation of attitudes and behaviors, the psychotherapeutic process, as well as to inspire the so-called third wave of cognitive behavioral therapies. The goal of this symposium is to bring together some original research within this research line. Cavallera et al. investigate the role of counterfactual thinking and different emotional components in predict the severity of post-traumatic stress symptoms. Santona et al. focus on the role of perspective-taking and mentalization skills in shaping adolescents attitudes toward homosexuality. Bassi et al. study the mediating role of emotional awareness and emotion regulation in the relationship between a crucial medical parameter (i.e., time in range) and subjective distress in patients with diabetes mellitus. Fiorini Bincoletto et al. assess epistemic trust in patient-therapist dyads to predict the magnitude of therapeutic alliance. Finally, Boldrini et al. propose an umbrella review on the efficacy of mindfulness-based programs for any mental or physical health outcome.

## HOMONEGATIVITY AND MENTALIZATION: AN INTERVENTION TO IMPROVE THE ADOLESCENTS' ATTITUDES TOWARDS HOMOSEXUALITY

*Alessandra Santona (Università degli Studi di Milano-Bicocca), Laura Gorla (Università degli Studi di Milano-Bicocca), Giacomo Tognasso (Università degli Studi di Milano-Bicocca)*

Although the attention toward the LGBTQ+ community is growing among young people, little action research has been designed to improve positive representations of homosexuality among Italian adolescents. The current study explores adolescents attitudes toward homosexuality through active intervention in perspective-taking and mentalization skills. Our sample was composed of 81 adolescents (19.8 % males, 71.6% females, 8.6% self-classified as "other"), aged between 13 and 19 years, fulfilling: a) the Attitudes Towards Lesbian and Gay Revised (ATLGR), b) the Modern Homonegativity Scale (MHS), c) the Attitudes Towards Same-Sex Marriage (ATSM), d) the Reflective Functioning Questionnaire-8 (RFQ-8), e) the Interpersonal Reactivity Index (IRI). Our participants presented an uncertainty about the mental states ( $t(57) = -2.72$ ,  $p=.009$ ), revealing no hypo or hyper-mentalizing aspects. The presence of opacity of mental states explains why mentalization does not influence homonegativity ( $F(5) = 1.23$ ,  $p=.304$ ;  $F(5) = 1.46$ ,  $p=.213$ ). Regarding homonegativity, we discovered a decrease in this after the intervention only in those with negative attitudes from the beginning.



## THE ROLE OF EMOTIONAL AWARENESS AND EMOTION REGULATION AMONG ADULTS WITH TYPE 1 DIABETES

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The present study aims to run a mediation model to explore the parallel mediating role of emotional awareness (i.e., clarity of feelings, attention to feelings, and mood repair), emotion regulation (i.e., expressive suppression and cognitive reappraisal) and self-efficacy in the relationship between Time in Range (TIR) and diabetes distress. A total of 315 adults (Meanage =  $39.52 \pm 13.33$ ) with Type 1 Diabetes Mellitus (T1DM) completed socio-demographic information and self-report measures through an online survey. More specifically, the Problem Areas in Diabetes Scale-Short Form-5, the Confidence in Diabetes Self-Care Scale, the Trait Meta-Mood Scale, and the Emotion Regulation Questionnaire were administered. Results showed that only clarity of feelings and self-efficacy mediated the effect of TIR on diabetes distress, by diminishing the latter. Interestingly, the literature lacks in that emotional awareness has yet to be included among psychosocial intervention targets among people with T1DM. Therefore, these results suggest that emotional awareness and self-efficacy should be considered in supporting the individual with T1DM to cope effectively with the behavioural and emotional challenges of living with and self-managing diabetes, thereby reducing diabetes distress.

## TRANS-DIAGNOSTIC EFFICACY OF MINDFULNESS-BASED PROGRAMS: AN UMBRELLA REVIEW OF META-ANALYSES OF RANDOMIZED CONTROLLED TRIALS

*Tommaso Boldrini (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Alessandra Andreani (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Viola Ghiandoni (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Gaia Dell'Arciprete (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Gabriele LoBuglio (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Marco Solmi (Department of Mental Health, The Ottawa Hospital, Canada - Ottawa Hospital Research Institute , Clinical Epidemiology Program, University of Ottawa, Canada - Early Psychosis: Interventions and Clinical-detection (EPIC) Lab, Institute of Psychiatry, Psychology & Neuroscience, Department of Psychosis Studies, Kings College London, United Kingdom)*

To comprehensively evaluate meta-analyses (MAs) of randomized controlled trials (RCTs) that investigated associations between mindfulness-based programs (MBPs) and a wide range of health outcomes. Three electronic databases (PubMed, Embase, and Cochrane Library) were systematically searched from inception to April 2022 for meta-analyses of RCTs investigating associations between mindfulness and health outcomes. We included 59 MAs (421 RCT), reporting on 21 mental disorders or medical conditions. Methodological quality of individual primary studies was evaluated using the GRADE (Grading of Recommendations, Assessment, Development and Evaluation) assessment. Each MA has been reanalyzed using the random-effects model. Summary effect sizes and their confidence interval for each outcome were estimated, along with prediction interval. We also calculated I<sup>2</sup>, small study effects, and excess significance that are associated with heterogeneity and bias. Treatments show moderate to medium efficacy for many outcomes in different clinical populations. However, the quality of RCTs included by MAs is very poor. Considering the economic interests that revolve around the mindfulness industry (estimated at around \$4 billion), high-quality RCT studies and longer follow-up period are needed.

## ASHAMED OR AFRAID? EXPLORING THE TRAUMATIC IMPACT OF NEGATIVE EMOTIONS RELATED TO COVID-19 RELATED EXPERIENCES AND THEIR PERSONAL ATTRIBUTION

*Cesare Cavallera (Università Cattolica del Sacro Cuore)*

The main objective of the current study was to investigate the role of shame, guilt and fear activations related to stressful experiences related to COVID-19 in predicting PTSD symptoms severity. 72 participants were recruited in Lombardy region (Italy) from June 2021 to February 2022. Primary outcome measures were intrusion, avoidance, hyperarousal and global traumatic stress scores related to the most stressful experience related to COVID-19 pandemic. Counterfactual thinking related to the stressful experience were also investigated. Using multiple linear models, the most consistent result was that the emotions of shame and fear related to stressful experiences related to COVID-19 predicted traumatic symptoms severity. Shame predicted in a more consistent way intrusion, hyperarousal and avoidance sub-scales. Further qualitative analysis on counterfactual thoughts of participants in relation to the COVID-19 related experience are now in progress. The present findings suggest the importance of shame in the maintenance of post-traumatic symptoms related to COVID-19 experiences. These results support the changes introduced with DSM-V in PTSD theoretical framework underscoring a range of self-related appraisals and emotions beyond the classic fear/life threat activations.

## EPISTEMIC TRUST AND THERAPEUTIC ALLIANCE IN PATIENT-THERAPIST DYADS: HOW TRUST AFFECTS PSYCHOTHERAPY

*Marianna Liotti (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Alice Fiorini Bincoletto (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Guido Giovanardi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Epistemic trust is the ability to regard interpersonally transmitted knowledge as trustworthy, relevant, and generalizable. Psychopathology seems characterized by a disruption of this ability and a permanent state of epistemic hypervigilance. In this perspective, the patient's experience of the therapist and the therapist's ability to promote trust seem vital for the therapeutic relationship. This study aims to assess epistemic trust, mistrust, and credulity in patient-therapist dyads and evaluate their association with the therapeutic alliance. Other variables will be measured (e.g., attachment, mentalization, transference and countertransference). A variety of questionnaires will be used to assess these variables and to collect data about socio-demographic characteristics. It is expected that higher levels of epistemic trust will predict a stronger therapeutic alliance, while higher scores concerning epistemic mistrust and credulity will be related to a lower quality of the alliance and of transference and countertransference processes. The investigation of the relationship between epistemic trust, therapeutic alliance, and the other variables considered will shed light on the dynamics underlying the therapeutic process, allowing for the planning of effective interventions.

## NEW HORIZONS IN MINDFULNESS RESEARCH

*Proponente: Francesco Pagnini (Università Cattolica del Sacro Cuore)*

Mindfulness has been a trending topic for the past two decades. The number of contributions has risen exponentially. The complexity of the construct prompted a variety of theoretical reflections and clinical applications, but potential implications are far from being fully realized. Built on this growing amount of literature, we are approaching new horizons for mindfulness research. For example, researchers have only begun to explore the role of mindfulness in the mind-body relationship, and the concept of mindfulness can be used to explain, support, and go beyond already existing theories; moreover, several psychological constructs seem to be related to mindfulness, which mechanisms still have to be unfolded. In this symposium, we will discuss some of these possibilities, with a mix of theoretical and data-driven contributions. The topics covered by the discussion include the relationship between mindfulness and mind-wandering, the role of mindfulness in the re-interpretation of the polyvagal theory, the effects of a mindfulness-based intervention to promote purpose in life and personal growth in adolescents, and the role of mindfulness as a protective factor during isolated and confined missions in Antarctica, with an outlook toward deep space missions.

## MINDFULNESS AND MIND-WANDERING: HOW ARE THEY LINKED?

*Cristiano Crescentini (Dipartimento di Lingue e Letterature, Comunicazione, Formazione e Società, Università degli Studi di Udine)*

The specific influence of Mindfulness Meditation (MM) on mind wandering (MW) remains an open matter, despite, for example, the central role of MW episodes during the practice of MM and the idea that MW and mindfulness would be opposite, divergent mental states. Nonetheless, more detailed empirical and theoretical proposals recently suggest that mindfulness and MW are likely to have a complex and non-linear relationship. This contribution reflects on this issue by elaborating on a number of key aspects that need to be considered in future studies to pinpoint this intriguing, and highly clinically relevant, relationship. In particular, we discuss the potential role of different kinds of MM practices (e.g., focused attention meditation and open monitoring meditation) and MW dimensions (e.g., spontaneous thought, task-unrelated thought or ruminative and worrisome thoughts) and MW phenomenological characteristics, as well as the individual level of expertise with MM and the possible contribution of individuals' personality traits. Methodological considerations will concern the utility of using both first-person and behavioral/physiological measures of MW and MM (e.g., experience sampling methods, attention tasks, MRI, oculometric measures etc.).

## A MINDFULNESS PROGRAM INCREASED PURPOSE IN LIFE AND PERSONAL GROWTH IN EARLY ADOLESCENTS

*Luca Iani (Università Europea di Roma), Francesco De Vincenzo (Dipartimento di Scienze Umane, Università Europea di Roma), Rossella Mattea Quinto (Dipartimento di Scienze Umane, Università Europea di Roma), Francesca Scafuto (School of Social Science and Human Services, Ramapo College of New Jersey, USA), Silvia Ghiroldi (The Global Village NGO), Federico Montecucco (The Global Village NGO), Fabio Presaghi (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma)*

Mindfulness-based interventions (MBIs) for early adolescents were more effective in reducing negative mental traits than in increasing positive mental traits. Moreover, MBIs for promoting hedonic well-being were found to be more frequent than the use of these interventions for enhancing eudaimonic well-being. The aim of this study was to investigate the effectiveness of a mindfulness program based on an ecological approach on well-being and psychological distress in early adolescents. A sample of 195 early adolescent students (boys=99, girls=96; Mage=11.49 years, SD=0.80) attending 12 middle school classes took part in the study. Participants completed the Psychological well-being scales, the Subjective happiness scale, and the Hospital anxiety and depression scale. We conducted a cluster randomized controlled trial that compared outcomes for adolescents assigned to the experimental group and the waiting list control group. A significant time by group interaction effect was found for Personal growth and Purpose in life. Students in the experimental group reported an increase in Personal growth and Purpose in life compared to the control group. The findings of this study provide evidence that the mindfulness program may promote eudaimonic well-being in early adolescent students.

## BEYOND THE POLYVAGAL THEORY: STATES OF MIND AND THE BRAIN HEART INTERPLAY

*Luca Ostacoli (Università degli Studi di Torino), Francesca Malandrone (Università degli Studi di Torino),  
Gaetano Valenza (Università di Pisa), Sara Carletto (Università degli Studi di Torino)*

The vagus nerve (VN) is the longest mixed cranial nerve and the only one that travels from the brain to the abdomen, forming the so-called “The gut microbiota–brain axis”. Its functions are to regulate the biological processes linked to survival and adaptation to the environmental features in our body. The Polyvagal Theory proposed by Porges (Porges, 1995) had become very popular to explain the relation between stressful events, stress related-behaviours, and stress physiological responses in mammals and humans in particular. Its success was largely due to the phenomenological correspondence with clinical practice, but the neurobiological explanation was questioned. In this presentation, we propose a clinical and relational description of the different “states of mind” of polyvagal levels and an alternative explanation of the neurobiological background, based on the dynamic interaction between the Central and Peripheral Autonomic Network, measured by the brain heart interplay. These hypotheses could open the way to more tailored clinical interventions.



## BEING MINDFUL IN THE MIDDLE OF ANTARCTICA: TOWARD MINDFULNESS-BASED INTERVENTIONS FOR SPACE EXPLORATION

*Francesco Pagnini (Università Cattolica del Sacro Cuore), Luca Ostacoli (Università degli Studi di Torino), Luca Iani (Università Europea di Roma), Cristiano Crescentini (Università degli Studi di Udine)*

As space missions move from low-earth orbit operations such as the International Space Station to long-duration exploration, the mission's crews will face a different set of experiences and stressors. It is important to identify key psychological outcomes to boost and support. Among various psychological constructs, mindfulness disposition proved to be strongly associated with both well-being and cognitive performance. With the MINDFUL-ICE study (promoted by the European Space Agency), we investigated the role of mindfulness as a protective factor over two 12-month missions in an isolated and confined environment, the Concordia base, in Antarctica. The base remained completely isolated during the winter period, and it is considered an accurate "analogue environment" to the space context. We conducted a longitudinal study, with repeated assessments (once every 3 months) of mindfulness, stress, and several health and performance parameters. Preliminary data, obtained from one mission (12 participants) indicate a strong negative association between mindfulness and stress, which gets stronger over time, after 6 months ( $Rho = -.722, p < .01$ ) and 9 months ( $Rho = -.628, p < .05$ ). These results pave the way for mindfulness-based interventions in deep space exploration.

## THE ASSESSMENT OF PARENTS, CHILD, AND PARENT-CHILD RELATIONSHIP WITHIN THE PDM-2 FRAMEWORK

*Proponente: Nicola Carone (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia)*

The mutual influences of parents' and child's characteristics on their relationship have been increasingly emphasized in the parenting psychodynamic literature. Yet, no clinically sensitive and empirically supported approach accounting for the bidirectional nature of these dimensions exists. Given its multidimensional and person-centered perspective, along with its specific assessment tools for each axis and related sections across the lifespan, the Psychodynamic Diagnostic Manual (PDM-2; Lingiardi & McWilliams, 2017) has the potential to provide a comprehensive approach to the assessment of parents, child, and parent-child relationship. In this symposium we bring together four papers which rely on the PDM-2 framework to assess childhood personality and mental functioning (Fortunato et al; Bizzi et al.), parenting skills and parent personality (Carone), and the observed parent-child relationship (Quintigliano). The results will be discussed pointing to the uniqueness of the PDM-2 in providing a reliable and clinically meaningful framework for the assessment of parent-child relationship in clinical and non-clinical (e.g., forensic) settings, while also considering the parents' and child's personality, mental functioning, and subjective symptomatic experience.

## PSYCHODIAGNOSTIC CHART-CHILD (PDC-C) AND CHILDHOOD PERSONALITY ASSESSMENT PROCEDURE Q-SORT (CPAP-Q): VALID AND CLINICALLY SENSITIVE DIAGNOSTIC TOOLS IN THE PDM-2 FRAMEWORK

*Alexandro Fortunato (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Anna Maria Speranza (Dipartimento di Psicologia Dinamica e Clinica, Sapienza Università di Roma)*

The reliable clinical-diagnostic evaluation of child patients is crucial. The present research sought to examine the validity of the Psychodiagnostic Chart – Child (PDC-C) and the Childhood Personality Assessment Procedure Q-sort (CPAP-Q) in assessing children’s functioning according to the framework of the Psychodynamic Diagnostic Manual, Second Edition (PDM-2). A sample of 250 clinicians assessed 250 children (aged 4–11 years) who had been in their care between 2–12 months, using the PDC-C and CPAP-Q. Each clinician also completed a clinical questionnaire to provide demographic information and the Child Behavior Checklist to evaluate children’s behavioral problems and social competences. Results: The findings suggest that the PDC-C and CPAP-Q are valid diagnostic tools that considers children’s full range of functioning. Moreover, the PDC-C has good sensitivity and appears clinically useful in differentiating between certain clinical populations according to psychological characteristics. The CPAP-Q can evaluate personality during developmental age and allows identifying personalities styles already during childhood. The PDC-C and CPAP-Q could promote more accurate assessment during childhood and inform the development of individualized therapies.

## ADVANCEMENT IN THE CHILD ATTACHMENT INTERVIEW USING A PDM-2 FRAMEWORK TO ASSESS MENTAL FUNCTIONING AND PERSONALITY

*Fabiola Bizzi (Dipartimento di Scienze della Formazione, Università di Genova), Francesca Locati (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Marta Tironi (Dipartimento di Scienze della Formazione, Università di Genova), Laura Parolin (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Emanuela Brusadelli (School of Psychology, University of Wollongong, Australia)*

The Psychodiagnostic Chart-2-Child and Adolescent version [PDC-2] can be applied to the CAI transcripts to assess the profile of mental functioning [M-Axis] and personality [P-Axis] providing a deep understanding of developmental stages in a PDM-2 framework. To do this, we compare attachment, mentalization, and symptomatology, operating a focus on clinical functioning in children and adolescents. 160 normative and clinical (31 with Disruptive Behavior Disorders [DBD] and 50 with Somatic Symptom Disorder [SSD]) youth from 8 to 15 y.o were involved and completed the CAI, later coded for reflective functioning [RF]. Parents completed the CBCL 6-18. Comparison between clinical vs normative groups, but not by age or gender, shows differences in the M-and P-Axis. Controlling for group, significant correlations emerge between Total M-and P-Axis, attachment security scales, and RF, but not with CBCL. Comparing groups, a worsening in M-Axis emerges in DBD, whereas SSD and normative sample are more similar in P-Axis. PDC-2 applied to the CAI allows for a broadening of understanding of psychological functioning beyond parental representations, useful for discriminating functioning between groups too. Assessing differences between clinical groups to define a severity profile is discussed.

## PSYCHOLOGICAL ASSESSMENT IN INFANCY AND EARLY CHILDHOOD: THE PARENT-CHILD RELATIONSHIP SCALE

*Maria Quintigliano (Sapienza Università di Roma)*

The importance of a multi-informant approach focused by the PDM-2 is fundamental in the assessment during early childhood, when the clinical evaluation is often supported by the contribution of parents' perception of the children, through self-reports or interviews. Considering clinician-report tools as a rich source of information, our contribution aims to introduce a new clinician-report tool, the Parent-Child Relationship Scale, that is an observational scale which assesses the individual and the overall contribution that parents and children give to the relationship. A sample of 268 mother-child dyads was observed and assessed by several clinicians using the P-CRS after 4 or 5 sessions. The P-CRS is composed by 50 items measured on a 5-point Likert scale and suitable for children from 1 month to 6 years of age. Items are formulated to focus on Interaction, Parent and Child contribution to the relationship. The EFA conducted finds 4 dimensions for "Interaction", 3 dimensions for "Parent" and 2 dimensions for "Child". Moreover, many of these factors have been found well distinguish distinct aspects of the relationship among various kinds of psychopathological conditions. Our findings may support the use of a multi-informant approach to the diagnosis during early childhood.

## THE PDM-2 GOES TO COURT: THE ASSESSMENT OF PARENTING, PERSONALITY, AND PARENT-CHILD RELATIONSHIP IN CHILD CUSTODY DISPUTES USING THE PDM-2 FRAMEWORK

*Nicola Carone (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia),  
Alexandro Fortunato (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di  
Roma)*

Although the PDM-2 (Lingiardi & McWilliams, 2017) was not primarily developed for forensic settings, its multidimensional perspective has the potential to complement self-report data and provide a comprehensive and empirically supported profile of parents' personality, mental functioning, and interpersonal capacities which can inform child custody disputes. Thirty cisgender, heterosexual, biological mother-father couples involved in child custody disputes were included, all with a child aged 1–3. Parenting skills, parents' personality, and parent-child relationship quality were evaluated through clinician reports (Psychodiagnostic Chart-2, SWAP-200, Psychodiagnostic Chart-Infancy and Early Childhood, section IV), semi-structured interviews (AAI, PDI), and observational measures (EAS, LTP). Preliminary results suggested that, among mothers and fathers, low levels of personality organization and overall mental functioning (assessed by the PDC-2) negatively influenced parent-child relationship quality (assessed by the PDC-IEC and the EAS), while better personality functioning (assessed by the SWAP-200) showed positive associations. The implications for adopting the PDM-2 as a reliable and clinically meaningful framework to be used in child custody disputes are discussed.

## **BODY BETRAYAL: PSYCHOLOGICAL CORRELATES OF FACING ILLNESS, PAIN AND CHRONICITY**

*Proponente: Michela Rimondini (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona)*

Living with chronic conditions of illness, pain or disability strongly affects patients' quality of life and their psychological and relational wellbeing. In these conditions, patients need to find new ways to trust their body and to deal with the feeling of betrayal resulting from the onset of the disease or unpleasant and painful physical sensations. An oncological or neurodegenerative diagnosis requires patients to accept that their body can react to the disease and treatments in ways that are not always controllable, forcing them to handle uncertainty as a constant element of everyday life. The unpredictability linked to the functioning of the organism is also present in conditions in which damage or pathologies are apparently not detectable, such as functional gastrointestinal disorders, in which people experience the frustration of a disease without a medical explanation. Identifying risk and protection factors that affect psychological wellbeing, detecting the strategies that can be adopted to promote acceptance and adjustment to chronic conditions, and embracing a biopsychosocial model of health, in which the three components are synergically integrated, are highly relevant in terms of public health.

## PERSONALITY TRAITS, EMOTION REGULATION, PSYCHOLOGICAL ADJUSTMENT AND COVID-19 ANXIETY IN PATIENTS WITH AN ONCOLOGICAL DIAGNOSIS

*Alessandra Babore (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Renata Tambelli (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Sonia Monique Bramanti (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti), Carmen Trumello (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti)*

There are approximately 14 million of new worldwide cancer diagnoses per year (World Health Organization, 2016). A cancer diagnosis and its treatment are life-changing experiences, with a significant impact on body image and function, psychological well-being, and family system (Hagedoorn et al., 2008). The current COVID-19 pandemic might have been experienced as particularly serious by oncological patients (e.g., high risk for severe complications if infected with COVID-19; treatment delays of non-COVID-19 pathologies due to the hospitals overload). The current study involved 211 participants (mean age = 46.34 years; SD = 12.56) with an oncological diagnosis, who were administered questionnaires on emotional regulation strategies, personality traits, psychological adjustment and anxiety specifically related to the COVID-19. Findings highlighted significant differences on the use of emotional regulation strategies and on levels of COVID-19 anxiety according to different cancer diagnoses. No differences were detected on general psychological adjustment and personality traits. Overall, collected data emphasise the importance of offering specific and tailored psychological support, able to promote and strengthen adaptive emotional regulation strategies.



## THE BODY AFTER CANCER: A QUALITATIVE STUDY ON BREAST CANCER SURVIVORS' BODY REPRESENTATION

*Valeria Sebri (Applied Research Division for Cognitive and Psychological Science, Istituto Europeo di Oncologia IRCCS Milano - Dipartimento di Oncologia ed Emato-Oncologia, Università degli Studi di Milano Statale), Ilaria Durosini (Applied Research Division for Cognitive and Psychological Science, Istituto Europeo di Oncologia IRCCS Milano), Davide Mazzoni (Dipartimento di Oncologia ed Emato-Oncologia, Università degli Studi di Milano Statale)*

Cancer diagnosis has an impact on breast cancer survivors' perception of their body due to the undesirable appearance-related side effects. Women may perceive their body as a traitor; thus, dispositional attitude towards body representation is often critical, with several consequences on their psychological well-being. In this study, 15 women with a history of breast cancer were involved in a psychotherapy group to promote body compassion. Before and after the therapy, participants were invited to describe their personal representation, emotions, and thoughts associated with their body. The analyses (Word Association Analysis and Specificity Analysis) were carried on with the software T-LAB. A thematic analysis was used to identify thematic clusters. Results highlighted qualitative changes in women's descriptions of their body, suggesting increasing attention, appreciation, and care for it. This study highlights the relevance of psychotherapy groups to improving patients' confidence in their body. Practical implications are related to the implementation of psychological interventions focused on cancer survivors' needs, helping them to rethink their body, and to promote wellbeing.

## PHYSICAL SIDE-EFFECTS, PAIN PERCEPTION AND MENTAL HEALTH IN CUMULATIVE LONG-STANDING AFTER PRIMARY MEDICAL TREATMENT IN BREAST CANCER

*Dina Di Giacomo (Dipartimento di Medicina Clinica, Sanità Pubblica, Scienze della Vita e dell'Ambiente, Università degli Studi dell'Aquila)*

Breast cancer (BC) diagnosis and treatment have become a cumulative long-standing chronic disease impairment, causing stress and turning into an allostatic load (AL) framework. This study aimed to investigate the relationship between physical issues and mental health in patients with BC after medical treatment. We conducted an observational study on 61 female patients with BC, and clinical and psychological markers have been detected. We conducted descriptive statistics, ANOVA analyses, correlations, and mediation analyses to verify the effect of the comorbidity index on psychological dimensions. The findings showed high levels of distress and moderate pain, and 32.8% of the patients showed moderate physical impairment. Significant effects of “age” and “physical issues” were found. The adult group reported a higher incidence of physical issues, and the group of patients reporting moderate physical impairment seemed more depressed than patients with mild physical issues. Finally, the comorbidity condition mediated the presence of signs of depression. Patients with BC seemed to experience negative emotions related to comorbidities associated with compromised activities of daily living. Our findings highlighted allostatic overload as a predictive framework to better understand the mental health of women with BC diagnosis to tailor effective psychological treatments for enhanced recovery

## FOSTERING RESILIENCE AMONG YOUNG ADULTS WITH MULTIPLE SCLEROSIS THROUGH A BIO-PSYCHO-SOCIAL APPROACH: INSIGHTS FROM THE EXPERIENCE OF THE ESPRIMO CO-CREATED INTERVENTION

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Multiple sclerosis (MS) is generally diagnosed during a significant personal, relational, and professional period of life, making the adaptation process to this chronic disease even more challenging. In the recent years, the ESPRIMO intervention has been developed with the aim of fostering resilience and health-related quality of life (HRQoL) among young adults with SM (age 18-45 years). Filling the gaps in the SM literature field, the ESPRIMO intervention has two main elements that characterize its originality: (i) is based on the bio-psycho-social model of health and illness, integrating psycho-social and physical activities group sessions, and (ii) has been co-created together with young adults with SM and healthcare professionals, through surveys and focus groups, including even the assessment of specific needs and coping strategies linked to the pandemic period. Results from the co-creation design will be presented and discussed together with the ones on the needs and resources emerged during the pandemic. Insights from the ESPRIMO project experience might be useful to enhance the quality and accessibility of bio-psycho-social interventions encouraging acceptance and adaptation to chronicity in an especially difficult phase of life.

## PSYCHOLOGICAL PREDICTORS OF FUNCTIONAL GASTROINTESTINAL DISORDERS: A CROSS-SECTIONAL COMPARISON WITH PATIENTS WITH ORGANIC GASTROINTESTINAL DISORDERS

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Functional Gastrointestinal Disorders (FGIDs) are chronic conditions characterized by gastrointestinal symptoms without underlying structural or biochemical abnormalities. To date, few studies investigated which psychological predictors better discriminate between patients with organic or functional GIDs. A total of 66 treatment-seeking patients with FGIDs and 33 patients with organic GIDs volunteered for this study. Diagnoses of FGIDs were performed by an experienced gastroenterologist according to ROME-IV criteria. After their first visit, all patients filled out a survey investigating several psychological dimensions, and the perceived severity of gastrointestinal disorders. Between-groups comparison were run through a logistic regression. Results showed that those with greater attachment anxiety, interpersonal problems, anxious symptoms, and gastrointestinal symptoms severity, and with lower expressive suppression (an emotion regulation strategy), had greater odds of having a FGID. Findings from this study deepen the understanding of those intra- and inter-personal psychological factors that may affect the likelihood of developing a FGID and suggest they may be targeted by mental health practitioners to reduce the burden of these chronic conditions.

## EXPANDING THE BOUNDARIES IN UNDERSTANDING AND ASSESSING EATING DISORDERS: NOVEL TRANS-DIAGNOSTIC VARIABLES AND THEIR IMPLICATIONS FOR TAILORED INTERVENTIONS

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The improvement of diagnostic and assessment approaches to eating disorders (ED) and eating-related conditions has significant implications for prevention and intervention planning. Most practice guidelines agree that there is an increasing need to identify relevant patients' characteristics over and above the boundaries of the descriptive psychiatric classification of ED. The goal of this panel is to present findings from studies that across different constructs and methodologies might help to shed light on individual differences within eating pathologies. The study by Aloï et al. explored the associations between personality, maladaptive schemas, and alexithymia in ED patients, and their effects on metacognition. The study by Gagliardini identified mentalizing profiles in ED patients, also exploring their differences in key clinical variables. The study by Muzi et al. evaluated through a Network Analysis the relationships between anger features and ED symptomatology in patients with AN and BN. The study by Mirabella et al. explored the different ways in which body uneasiness is expressed in subjects with ED and Gender Incongruence. The study by Costanzo et al. explored the clinical features of Orthorexia Nervosa as assessed by the novel Teruel Orthorexia Scale.

## THE ROLE OF PERSONALITY TRAITS, MALADAPTIVE SCHEMAS AND ALEXITHYMIA IN DEFINING METACOGNITION ACROSS THE ED SPECTRUM

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Metacognition has been implicated in the psychopathology and outcome of eating disorders (ED). However, the role of different psychological processes contributing to this construct has been poorly investigated. The current research explores the association between personality traits, early maladaptive schemas, alexithymia, and metacognitive functions. A total of 225 patients with EDs (AN 82, BN 49, BED 94) completed self-report questionnaires evaluating personality traits, maladaptive schemas, alexithymia, and metacognition. Groups were compared in the variables of interest through one-way ANOVA. A linear regression analysis was run to assess the variables associated with metacognition. Self-monitoring and mastery sub-functions of metacognition significantly differed between groups, with BN exhibiting the worst pattern. Regression analysis revealed that personality traits and alexithymia were specific predictors of these metacognitive abilities in AN and BN; conversely, definite maladaptive schemas had better predictive profile of metacognitive functioning for patients with BED. Focusing these constructs in therapy could enable patients with EDs to become more aware of their internal states and learn strategies to managing emotions.

## ORTHOREXIA NERVOSA VS HEALTHY ORTHOREXIA: PRELIMINARY RESULTS OF THE ITALIAN VALIDATION OF THE TERUEL ORTHOREXIA SCALE (TOS)

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Orthorexia nervosa (OrNe) is a pathological condition characterized by a fixation on healthy diet. An increasing number of studies has been conducted on this mental preoccupation, but the validity and reliability of the psychometric instruments employed in its assessment are still under debate. Among these measures, the Teruel Orthorexia Scale (TOS) seems to be promising, given that it allows to differentiate between OrNe and other non-problematic forms of interest with healthy eating, defined as Healthy Orthorexia (HeOr). This distinction may be clinically relevant, given that while OrNe is associated with psychopathology, HeOr seems to be independent from it. For this reason, the aim of this study was to examine the psychometric properties of an Italian version of the TOS, by testing its factorial, construct, convergent, and discriminant validity, internal consistency, test-retest reliability, and invariance across gender. Through an online survey, we recruited 782 participants from different regions of Italy, asking them to complete the following self-report instruments: TOS, EHQ, EDI-3, OCI-R, BSI-18, and WI-7. Preliminary results seem to support the holding of the bidimensional structure of the TOS also in the Italian context.

## MENTALIZATION AND EATING DISORDERS: AN EMPIRICAL INVESTIGATION ON ADULT PATIENTS

*Giulia Gagliardini (Dipartimento di Studi Umanistici, Università di Urbino)*

The aim of this work is to investigate the possible presence of mentalizing profiles in EDs. A sample of 157 adult patients treated in psychotherapy completed a series of self-report measures including the Reflective Functioning Questionnaire, the Difficulties in Emotion Regulation Strategies, the Interpersonal Reactivity Index. Clinicians rated patients' imbalances in mentalization, prementalizing modes and attachment style. A latent profile analysis was conducted to test the presence of subgroups. MANOVA was used to test the differences between the four mentalizing profiles in relation to emotion dysregulation, empathy, and impairments in mentalizing. The latent profile analysis suggested the presence of four different profiles in relation to impairments in the dimensions of mentalization: (1) affective/self/automatic imbalances, (2) external imbalance, (3) cognitive/self/automatic imbalances, and (4) cognitive/other/automatic imbalances. The profiles were heterogeneous in terms of EDs represented in each group and presented differences on attachment style, emotion dysregulation, empathy, interpersonal reactivity, and reflective function. ED patients can be classified in relation to impairments in different dimensions of mentalization above and beyond ED diagnosis.



## DIFFERENT MEANINGS AND EXPRESSIONS OF BODY UNEASINESS IN EATING DISORDERS AND GENDER INCONGRUENCE

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Body uneasiness is a core aspect of Gender Incongruence (GI) and Eating Disorders (ED), and literature evidenced cases of co-occurrence between the two diagnoses (Jones et al., 2016). The aim of this study was to explore the different ways in which body discomfort is expressed in subjects with ED vs GI. Thirty-four participants with GI (29 AFAB; 5 AMAB) at stage T0 of hormonal treatment and 34 subjects with ED (AN=22; BN=9; BNG=2; NOS=1) evaluated at treatment onset, completed the Eating Disorder Inventory-3 (EDI-3) to assess eating symptoms, the Body Uneasiness Test (BUT) to investigate body discomfort and the Shedler-Westen Assessment Procedure-200 (SWAP-200) to measure personality patterns. General severity of body uneasiness was higher in ED subjects, but GI individuals reported higher body image concerns and body avoidance. Different associations between the severity of eating symptomatology and personality features emerged among the two samples. Evaluating the expressions and meanings of body uneasiness in subjects with GI and ED is a key factor in order to promote more accurate and clinically useful diagnostic formulations, as well as tailored multidisciplinary therapeutic interventions focused on individuals' specific characteristics.

## ANGER EXPRESSION AND EATING DISORDER CORE SYMPTOMS: A NETWORK ANALYSIS STUDY

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Many patients suffering from eating disorders (EDs) show more or less frequent and pervasive manifestations of anger, which may act as an antecedent or a trigger of several eating-disordered behaviors, influence the severity of ED symptoms, and interfere with clinical management. This study explored the relationships between anger features and several dimensions of ED symptomatology through a Network Analysis (NA) approach. Patients with anorexia nervosa (AN; N=161) and bulimia nervosa (BN; N=96) completed the State-Trait Anger Expression Inventory (STAXI) and the Eating Disorder Inventory-3 (EDI-3) at a residential treatment intake. Findings showed that in AN patients the STAXI Anger Expression Inwards and Anger Expression Control had high centrality, along with EDI-3 Eating Disorder Risk and Drive for Thinness. Conversely, the STAXI Trait Anger, the EDI-3 Ineffectiveness and Affective Problems had high centrality in BN patients. Several correlations between central nodes of anger expression and ED symptoms also emerged. These NA results suggest that exploring the complex relationships between anger and ED pathology could identify new relevant targets for tailored therapeutic interventions and treatment protocols.

## EXPERIENCE AS EVIDENCE: A NEW PARADIGM FOR CLINIC AND RESEARCH?

*Proponente: Elena Faccio (Università degli Studi di Padova)*

The symposium is aimed at exploring the potentialities of co-writing, a practice where a clinician and a patient are mutually engaged in collaboratively writing about the patient's personal experience of crisis, recovery, and the therapeutic process. Unlike a mere set of therapeutic techniques, co-writing is an innovative method oriented at producing a "narrative jointly truth" based on sharing perspectives and meanings and aimed at overcoming the epistemic asymmetry between the expert and the patient in favor of intersubjective dialogue. During the symposium we want to present and discuss specific purposes, connected benefits and potential risks linked to this promising devise, we will also explore its impact in the clinical research providing real testimonies. This approach may foster new responses but also new responsibilities for clinicians, many of which are still unknown in the literature; it relies on a renewed conceptualization of the mental disease nature and may lead to a radical revision of the clinical encounter, which grounds the "clinical evidence" on the co-construction of the narrative lived experience more than on the solipsistic application of the clinician's judgement.

## CO-WRITING AS A NEW STRATEGY IN THE APPROACH TO THE MENTAL HEALTH FIELD: THEORETICAL, EPISTEMOLOGICAL, OBJECTIVES, AND ETHICAL IMPLICATIONS

*Roberto Vitelli (Università degli Studi di Napoli Federico II)*

In recent years several researchers have suggested the implementation of collaborative writing with patients about their personal experience of crisis, recovery, and the therapeutic process. These products are more often proposed for publication in scientific journals. Without doubt, this new approach represents a radical paradigmatic shift within the therapeutic and research strategies in clinical psychology. Attention to the users and the improvement of their active roles represents not only a strategy for the empowerment of results but also the access door to a different perspective in the approach to the mental health field. Through balancing the power relation between clinicians/researchers and patients, co-writing integrates everyones voices into a fair and shared narrative. This contribution aims to highlight the theoretical and epistemological premises of the co-writing experience. It identifies and briefly describes four non-clinical epistemological paradigms on which it is grounded: ethnography, values-based practice, narrative care, and phenomenology. Moreover, it will consider purposes and forms of co-writing trying to systematize the possible objectives and potential benefits for professionals and patients, as well as its ethical implications.

## WRITING STORIES TOGETHER: CO-WRITING IN THE CLINICAL SETTING

*Giovanni Stanghellini (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

This talk will explore four potential benefits of collaborative writing in the psychotherapeutic setting. Sharing of perspectives: Co-writing allows clinician and patient to highlight their different perspectives and promotes a reciprocal exchange. They cooperate in the co-construction of a meaningful narrative that includes and, if possible, integrates contributions from both sides. The patient may learn to tolerate potential conflicts of values and beliefs. Finally, co-writing facilitates coexistence when it is not possible to establish consensus. Sharing of responsibility: Co-writing encourages participation in therapy and expands the patient's sense of agency. It also helps change the role from that of being a patient to that of being an "expert by experience" able to offer others suggestions. Sharing of engagement. Letting other people know about one's psychopathological condition and/or therapeutic achievements can make the patient realize that her/his personal story can be relevant/meaningful/helpful for other persons. Sharing of knowledge. Co-writing may increase the sense of mastery of experiences allowing a horizontal sharing regarding the issues of epistemic power in the search for self-knowledge. The patient may become the "psychopathologist of him/herself".

## CO-WRITING IN CLINICAL RESEARCH FOR ASSURING THE MENTAL HEALTH SERVICE'S QUALITY

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In the last decades, narratives from people with lived experience of mental health problems seem to be even more welcome in the clinical research and in specialized journals. They have the potential to develop mental health assessment and nursing practice and advance wider personal understanding of mental health phenomena. Two experiences of jointly writing published on the Journal of Mental and Health Nursing will be presented: the first refers to a rehabilitation path in an addiction center for young people, the second to a voluntary psychiatric treatment in a Mental Health Service. Both stories reveal what may happen when the users and the service operators don't share aims and meanings associated to treatment. The lack of connections between personal goals and service mission may create severe misunderstanding and is likely to develop in the treatment failure unless specific communicating strategies, capable of modifying reciprocal roles and attitude are put in place. Live experiences represent an effective mirror for rethinking staff conduct and for improving the relationship quality, and their production through a collaboration between user and operator may strategically reinforce and give a stance for the "fusion of horizon" that is at the basis of the treatment success.

## CO-WRITING IN PARTICIPATORY RESEARCH

*Raffaella Pocobello (Istituto di Scienze e Tecnologie della Cognizione, CNR), Francesca Camilli (ISTC-CNR)*

In the last decades, a new recovery-oriented approach to treatment and care has emerged in mental health services. The core values of a recovery-oriented service are person orientation, the persons involvement in the planning and management of services, the promotion of self-determination and choice. These core values are just as central in researching and evaluating mental health services. In this contribution, we intend to present the experience of using a recovery-oriented and participatory approach in mental health services research and evaluation and the role of co-writing in this process. We will refer to two experiences: participatory research on a co-produced mental health centre and 2) a participatory approach in designing an international conference. In the first experience, the co-writing was related to defining the research protocol and writing the final paper. In the second experience, the co-writing process aimed at revising the peer-review criteria for selecting conference contributions and elaborating a code of conduct. Our experience shows that the involvement of experts by experience is crucial to improving the usefulness and quality of research and scientific dissemination.

# INDIVIDUAL VULNERABILITY FACTORS FOR MENTAL DISORDERS: PROMISES AND CHALLENGES OF THE TRANSDIAGNOSTIC PERSPECTIVE

*Proponente: Barbara Penolazzi (Dipartimento di Scienze della Vita, Università di Trieste)*

The transdiagnostic approach aims to identify individual vulnerability factors shared by many mental disorders, to overcome some questionable assumptions of the current official nosological systems (like the categorical and independent nature of psychopathologies, which is justified neither by clinical experience, nor by empirical research). Over time, several biological and psychological variables have been proposed as proximal transdiagnostic vulnerability factors (e.g., altered processes in neurophysiology, personality, cognition, affectivity), given their strict link with multiple symptoms and mental disorders. However, despite the transdiagnostic perspective has been embraced by eminent frameworks of psychopathology (e.g., RDoC, HiTOP), a paradigm shift has still yet to occur. The present symposium will include contributions on some promising psychological/biological transdiagnostic vulnerability factors (i.e., clinical perfectionism, emotion dysregulation, repetitive negative thinking, neural correlates of body odor processing), underlying numerous symptoms/disorders. The goal of the symposium is to provide an opportunity to discuss the state of the art of the transdiagnostic proposal, and the unsolved issues which preclude the clinical improvements it originally promised.



## EMOTIONAL BODY ODORS PROCESSING IN SOCIAL ANXIETY AND DEPRESSION

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Human body odors have been shown to be an effective modality of social communication. Importantly, individuals exposed to emotional body odors report a partial reproduction of the affective state of the sender. This is particularly relevant in conditions in which social interactions are impaired, as depression and social anxiety. We will present a high-density EEG study in which we investigated how body odors collected in a happiness and a fearful condition modulate the subjective rating and the neural processing of neutral faces in 75 individuals with different degrees of depressive and social anxiety symptoms. A significant interaction between depression and odor condition emerged in predicting the subjective rating of the neutral faces. Motivated attention, indexed by the Late Positive Potential (LPP) amplitude, was predicted by the interaction between depression and odor condition: in the fearful odor condition higher depressive scores led to higher LPP amplitude, whereas in the happiness odor condition higher depressive scores led to lower LPP amplitude. With the results of this study, we will provide a psychophysiological framework of the role of body odors in affective disorders. A potential role of body odors in the treatment of these disorders will also be discussed.

## PERFECTIONISM AND ORTHOREXIA NERVOSA IN CLINICAL AND NON-CLINICAL GROUPS

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Orthorexia Nervosa (ON) is mainly characterized by excessive concern about eating healthy food. The significant overlap between ON and other disorders, the related absence of diagnostic criteria recognized by the DSM-5, and the limitations characterizing the measures, make it difficult to assess and, eventually, treat this psychological problem. ON is strictly interconnected with some clinical conditions (such as, Obsessive-Compulsive and Eating Disorders symptoms), and non-clinical habits (e.g., following diet rules). In addition, for this reason, it is important to investigate the key elements related to ON and bring the attention in evaluating the trans-diagnostic constructs characterizing all these psychological problems. In literature, correlations between higher orthorexic characteristics and perfectionism have been highlighted primarily in a non-clinical sample. Considering diet as a risk factor in Eating Disorders, and ON, we aim to investigate perfectionism in a sample composed of 645 individuals belonging to clinical, non-clinical or on-diet groups with higher or lower orthorexic characteristics. We will discuss results and their implications in the light of the cognitive aspects related to disordered eating.

## REPETITIVE NEGATIVE THINKING AND COGNITIVE CONTROL: A TRANSDIAGNOSTIC MULTI-METHOD ASSESSMENT STUDY

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Repetitive Negative Thinking (RNT) is a passive and relatively uncontrollable recurring thinking focused on negative content, which has been proposed as transdiagnostic process for many psychopathologies. It can assume various disorder-specific forms, among which the most studied are depressive rumination on one's own misfortunes/failures, and anxious worry for future threats. Meta-analytic data linked rumination and worry to a specific deficit in discarding irrelevant material from working memory. Here, we present a study in which various tasks, assessing different cognitive control functions, were administered to a sample of healthy volunteers (N=139) in order to evaluate their associations with RNT. Both general and specific RNT forms were explored and self-report data on symptoms in various psychopathological domains were also collected. In addition to significant associations between all the measured kinds of RNT and symptoms, only selective associations were found with the various cognitive control processes. We will discuss theoretical and applied implications of these findings in the context of the ongoing debate on the possibility that different forms of RNT represent specific processes, rather than the same process applied to different disorder-specific content.

## PERFECTIONISM AND EMOTION REGULATION INTERACT IN PREDICTING EATING DISORDER SYMPTOMS IN ADOLESCENTS AND YOUNG ADULTS

*Mariacarolina Vacca (Sapienza Università di Roma), Caterina Lombardo (Dipartimento di Psicologia, Sapienza Università di Roma)*

Perfectionism consists of 2 dimensions: Perfectionistic Concerns (PC) and Perfectionistic Standards (PS). While findings evidence that PC is a transdiagnostic risk factor for numerous disorders, the role of PS is still debated. One possible underlying mechanism linking perfectionism to psychopathology is its interaction with emotion regulation (ER). The presentation will contribute to disentangling the role of these variables through a systematic review. Results of an empirical study will also be presented, addressing the interaction between PC, PS and ER in predicting EDs. Totally, 271 adolescents ( $M_{age} = 14.80 \pm .592$ ) and 392 young adults ( $M_{age} = 20.67 \pm .3390$ ) completed the Multidimensional Perfectionism Scale, the Cognitive Emotion Regulation Questionnaire (CERQ) and the Disordered Eating Questionnaire. Results of a multigroup mediation model showed that maladaptive and adaptive CERQ mediated the effect of PC on EDs in both groups. Results on PS suggested adaptive CERQ explained the negative associations with EDs. The negative indirect effect of maladaptive CERQ was only significant among young adults. These results suggest that the protective buffering role of PS against the negative consequences of maladaptive ER on EDs may be supported in young adults but not in adolescents.

# LOOKING AT THE PARENTING THROUGH THE LENS OF PARENT-CHILD RELATIONSHIP: EMPIRICAL EVIDENCE AND CLINICAL IMPLICATIONS

*Proponenti: Fabiola Bizzi (Dipartimento di Scienze della Formazione, Università di Genova), Chiara Pazzagli (Università degli Studi di Perugia)*

In the context of a caregiving environment, the role of parent-child relationship provides the foundation for the child's social-emotional and cognitive development. However, several risk factors may undermine the quality of caregiving, leading to less than optimal child developmental outcomes. In this regard, maternal depression, anxiety, and parental stress seem to be connected with the parents' capacity to hold the child in mind– i.e., parental mentalizing– as well as with parental bonding. Moreover, these parental features appear to be able to mediate or moderate the negative impact of parental difficulties. Consequently, the main aim of this symposium is to present empirical evidence and clinical implications regarding parental features such as parental reflective functioning, parenting stress, and parental symptomatology that may influence both parents and child's psychological outcomes. In particular, the contributions of Buratta et al. and Ierardi et al. investigate post-partum maternal parenting and mentalizing; Vismara et al. introduce outcomes from a reflective parenting home visiting program; Charpentier-Mora et al. present the role of parental mentalizing later in middle-childhood.

## MATERNAL BONDING BUFFERS THE EFFECTS OF DEPRESSIVE AND ANXIOUS POSTPARTUM SYMPTOMS ON PERCEIVED PARENTING STRESS

*Livia Buratta (Università degli Studi di Perugia), Claudia Mazzeschi (Università degli Studi di Perugia), Elena Coletti (Università degli Studi di Perugia), Chiara Pazzagli (Università degli Studi di Perugia)*

Several studies have pointed to the close and complex interactions among depressive and anxious postpartum symptoms, maternal-infant bonding, and parenting stress, and their important impact on the mother-infant relationship. The current study examined whether maternal bonding could buffer the effect of postpartum reported depressive and anxious symptoms on parenting stress and thus be a mediator between these constructs. In a community sample of 111 women ( $M [SD] = 32.70 (4.34)$  yrs old), maternal bonding (MPAS), depressive and anxious symptoms (EPDS; STAI) and parenting stress (PSI) were assessed at three months postpartum. Pearson's correlation analyses showed moderate to high correlations between the investigated factors. The three mediation models ran showed that mother's MPAS partially mitigates the effects of the EPDS ( $b = .729$ ;  $SE = .207$ ;  $95\%CI = .330 - 1.14$ ) and STAI State ( $b = .396$ ;  $SE = .106$ ;  $95\%CI = .197 - .616$ ) on PSI and, totally mediated the relationship between STAI Trait and PSI ( $b = .609$ ;  $SE = .153$ ;  $95\%CI = .327 - .919$ ). Results indicated that maternal bonding is an important protective factor for the negative impact of postpartum depression reported symptoms and anxiety on parenting stress. Clinical implications will be discussed.

## PARENTAL EMBODIED MENTALIZING AND ITS RELATION TO MATERNAL DISTRESS, REFLECTIVE FUNCTIONING, AND MATERNAL STYLES OF INTERACTION

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Maternal depression and anxiety affect maternal parenting and mentalizing abilities in the perinatal period (Cameron et al., 2016). 75 mother-infant dyads have been recruited to examine the relation between nonverbal level of mentalizing, maternal depression and anxiety, verbal mentalizing, and maternal style of interaction. At infant 3 months, EPDS for maternal depression, STAI-Y for maternal anxiety, and reflective functioning (RF) scale for verbal mentalizing was administered to the mothers; mother-infant interactions were coded to analyze Parental Embodied Mentalizing (PEM), Mind-mindedness (MM), and maternal style of interaction with Care-Index. Results showed that PEM was negatively correlated to maternal depression, state anxiety and maternal controlling style but it was not associated to verbal mentalizing (RF and MM). Mothers with psychopathological problems had lower PEM and sensitivity and had more controlling style than mothers with no psychopathological problems. Moreover, maternal depression and anxiety had direct effects on maternal sensitivity and had indirect effects mediated by PEM on controlling style. These results highlight the importance of early clinical and prevention programs for mothers focused on implicit mentalizing during the postpartum period.

## IMPROVING PERINATAL MATERNAL MENTAL HEALTH THROUGH A REFLECTIVE PARENTING HOME VISITING PROGRAM

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Maternal Reflective Functioning (RF) has proved to be among the strongest predictors of the child's development. Our study aimed at evaluating the effects of a reflective parenting home visiting program (RPHVP) in first-time mothers at risk for depression, anxiety, and parenting stress, from three to 12 months after their child's birth. 72 first-time mothers completed the Edinburgh Postnatal Depression Scale, the State-Trait Anxiety Inventory, and the Parenting Stress Index-SF at 3, 6 and 12 months of their infants (53% boys and 47% girls). Thirty-six mothers were allocated to the RPHVP, the other 36 constituted the control group, who received routine primary care and a marginal, limited psychosocial intervention through telephone calls. A significant higher decrease of depression, anxiety and parenting stress was shown among mothers undergoing RPHVP, compared to the control group. RPHVP seems to foster the mother's capacity to acknowledge and regulate her own mental states; such experience may in turn promote her capacity to tolerate and regulate her child's inner experiences, enhancing mother-child's functioning.



## EXPERIENCING STRESS AND ALLIANCE IN PARENTS OF CHILDREN IN MIDDLE CHILDHOOD. WHICH ROLE FOR PARENTAL MENTALIZING?

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Few studies addressing the impact of parental mentalizing (PM), parental stress, and alliance experience on child's psychological outcomes. This study aims to explore the link between parental stress and alliance experiences on child's psychological outcomes and the role of PM as a moderator within these relations in middle childhood. 86 parents and their 50 children were involved. Insightfulness Assessment and PRFQ were used to evaluate PM while PSI and PAM questionnaires were used to evaluate parental stress and alliance. Child's psychological symptoms and social-emotional competencies were assessed through CBCL and DESSA questionnaires. Parental stress and alliance were significantly associated with child's psychological symptoms and social-emotional competencies. Furthermore, moderation analyses revealed that: (1) mother's mentalizing deficits have a moderating effect on the link between maternal stress and child social-emotional competencies; (2) mother's mentalizing deficits have a moderating effect on the link between maternal alliance and child social-emotional competencies. Results suggest that individual mentalizing deficits may assume a key-role within relational variables impacting child's psychological outcomes, thus stressing their importance within family dynamics.

## ATTACHMENT AND PARENTAL BOND: IMPACT ON PSYCHOPATHOLOGY AND QUALITY OF LIFE IN HEMODIALYSIS PATIENTS

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Attachment theory represents a reference model for better understanding how pre-existing personality factors can contribute to the development of some chronic conditions. The onset of a chronic disease can represent a threat to the relationships between the subject and the parental figures, according to the type of bond that already exists. 50 patients with chronic renal failure and hemodialysis were given the following tests: Attachment Style Questionnaire (ASQ) to assess attachment styles, Parental Bonding Instrument (PBI) to assess parental bonding, Short Form Health Survey-36 (SF-36) for perceived quality of life and Middlesex Hospital Questionnaire (MHQ) to detect key symptoms and relevant traits. The results showed that secure attachment is significantly associated with adequate general health and mental health of the SF-36. Maternal care was also significantly associated with a good SF-36 mental health index. The results confirmed the positive role of a secure attachment style and a good parental bond for an adequate mental health. Identifying patients with dysfunctional attachment styles early will make it possible to offer them targeted interventions to improve their ability to accept, adapt and manage the disease and to maintain adequate mental well-being.

# METACOGNITIVE THERAPY VERSUS COGNITIVE BEHAVIORAL THERAPY: NEW PERSPECTIVES

*Proponente: Diego Sarracino (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

Cognitive Behavioral Therapy (CBT) consists of a group of treatments with one key aspect in common: modifying maladaptive thoughts and behaviors. Several meta analyses indicate that CBT has strong empirical evidence and works well for a wide range of specific disorders, particularly anxiety and depression; however, applying treatment focused on a single disorder can be problematic because comorbidity is common in psychiatric patients, especially in anxiety disorders. To address this critical issue, clinical theory and research have developed transdiagnostic models that specifically emphasize the role of metacognitive processes as determinants of dysregulated emotional states. At the same time, interventions focused on modifying metacognitive processes, such as metacognitive therapy (MCT), suggest the possibility of achieving increased efficacy over current therapies. The presentations in this symposium aim to explore and compare the specific mechanisms of action of cognitive and metacognitive treatments in order to evaluate the efficacy of transdiagnostic treatments compared to the gold standard represented by second-generation cognitive therapies.

## AN EXPLORATORY STUDY ON METACOGNITION, WORRY AND ANXIOUS SYMPTOMS IN CHILDREN

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The Self-Regulatory Executive Function model proposed by Wells and Mathews suggests that metacognition has a role in maintaining worry or rumination, exacerbating anxious symptoms in adults suffering from emotional disorders. To date, scientific literature on metacognition and anxiety in children is still limited. Nonetheless, studies on worry and metacognition in children affected by emotional disorders could help in determining whether the metacognitive model can be applied to children. The main purpose of this study was to evaluate cognitive processes (worry and rumination) and metacognitive beliefs in children with different subtypes of anxious symptoms. Through an online survey, the Penn State Worry Questionnaire for Children, the Screen for child Anxiety Related Emotional Disorders, the Metacognitions Questionnaire for Children, and Children's Depression Inventory were administered to 87 children (58.6% female) aged 8-14 years and to their parents. Results indicated that metacognitive beliefs and process metacognitions were significantly associated with anxiety. Therefore, metacognitions might play a significant role in children anxiety and we believe that tailored treatments based on metacognition should be developed for anxious children.

## REHABILITATION OF SOCIAL COGNITION (SC) IMPAIRMENT AFTER SEVERE ACQUIRED BRAIN INJURY (SABI): PRELIMINARY RESULTS ON A COMPARISON BETWEEN A SPECIFIC VS. A NON-SPECIFIC TREATMENT

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Theory Theory (TT) model, as a possible explaining model of SC abilities, posits a close relationship between Theory of Mind (ToM) and some cognitive domains, particularly executive functions. Accordingly, the treatment of executive dysfunctioning could be sufficient to rehabilitate SC impairment. TT model is still debated in the literature, since according to another model (i.e., Simulation Theory – ST) SC would closely relate to emotional processes and, as such, require a specific rehabilitation treatment. Aim of this study was to compare a non-specific treatment (i.e., based on the rehabilitation of dysexecutive syndrome), with a specific treatment of SC (i.e., the Mentalization-based Treatment – MBT). Three participants, with sABI previously admitted to the IRCCS Fondazione Santa Lucia hospital for rehabilitation, were recruited and randomly assigned to the specifically treated (N= 2) or the non-specifically Group (N= 1). After treatment, participants specifically treated reported significant better ToM skills (i.e, IRI and Faux pass Test scores) compared to the non-specifically treated patient. Our data could suggest that despite the close relationship between SC abilities and executive functioning, SC impairment should be treated with a specific training, such as the MBT.

## EMOTION DYSREGULATION: THE ROLE OF METACOGNITIONS AND REPETITIVE NEGATIVE THINKING

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This cross-sectional study explored whether metacognitions and repetitive negative thinking (rumination;worry) are associated with emotion dysregulation. 395 subjects (62% Females; mean age=36.4 years) from the general population and 189 patients seeking psychological treatment (38% Females; mean age=36.6 years) were enrolled. The Difficulties in Emotion Regulation Scale (DERS), the Meta Cognitions Questionnaire 30 (MCQ-30), the Ruminative Response Scale (RRS), the Penn State Worry Questionnaire (PSWQ) were used. Correlation and path analyses were run. In general population and clinical sample: metacognitions, worry, and rumination were positively correlated with emotion dysregulation ( $p<0.001$ ); metacognitions were positively correlated with worry and rumination ( $p<0.001$ ). In the general population: rumination mediates the relationship between metacognitions and emotion dysregulation; metacognitions were directly associated to emotion dysregulation (TDC=0.66). In the clinical sample: worry and rumination mediate the relationship between metacognitions and emotion dysregulation; metacognitions were directly associated to emotion dysregulation (TDC=0.64). Emotion dysregulation seems to be associated with the tendency to engage in repetitive negative thinking and metacognitions.

## METACOGNITIVE ASPECTS OF CASE FORMULATION IN COGNITIVE BEHAVIORAL THERAPY

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The shared case formulation represents the basis on which to develop an effective treatment from a cognitive behavioral perspective. Basically, through case formulation, the clinician is able to make sense of what is going on in the patients mind. It is the main tool for understanding the causes and maintenance of the problems reported in the clinical setting and must also include the functional and adaptive aspects of the patient, not just the maladaptive aspects of his or her functioning. The rationale for the case formulation is metacognitive because it assumes that the person, once aware of his or her pattern of functioning, can decide to modulate (metacognitively) interactions with situations, beliefs, and consequences, both mental and behavioral. The earlier neo-psychoanalytic model is also metacognitive in its own way; that model influenced Beck because its basic assumption was that conscious mental states can modulate unconscious mental drives once a person becomes (metacognitively) aware of them. In both cases, it is believed that it is possible to move from management by (unconscious?) automatisms of behavioral sequences or drives to conscious executive management through metacognitive analysis.

## DEVELOPMENT OF AN IMPLICIT MEASURE FOR STUDYING IRRATIONAL BELIEFS

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According to REBT model, irrational (i.e., dogmatic/inflexible) beliefs are the most important proximal cause of emotional disturbance. In view of the importance of these beliefs in generating psychopathology and developing effective REBT/CBT treatment, this study aims to investigate the “implicit” dimension of individual’s beliefs. At this regard, we developed the Implicit Beliefs Test (IBT), a modified version of the Implicit Association Test. In this study, we examined the psychometric properties of IBT and its possible correlations with an explicit measure of rational/irrational beliefs and anxiety levels. The participants were 202 Italian undergraduate students. The battery of tests was composed as follows: IBT-Implicit Beliefs Test, EBT-Explicit Beliefs Test and STAI. We found a significant positive association between EBT and STAI. In contrast, the association between IBT and STAI was not significant, except when considering only the statements into “I believe it/I don’t believe it” category. The preliminary results of the study suggest that IAT methodology may be used for investigating the implicit component of dysfunctional beliefs and may have potential clinical applications, especially in relation to anxiety issues.



## COMPLEXITY IN PSYCHOSOMATICS: ADVANCES AND PERSPECTIVES – 4TH EDITION

*Proponente: Piero Porcelli (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

This symposium aims to provide a fourth update (the first was held in Turin in 2017) on new research and perspective in psychosomatic medicine. Cattivelli and Grandi will introduce a new promising method (Ecological Momentary Assessment, EMA) for real-time ecologic assessment of somatic symptoms and psychological correlates. Rosa and Porcelli will report preliminary data on the poor investigated field of psychological and somatic issues in victims of Intimate Partner Violence (IPV). Two further studies will focus on fibromyalgia (FM). In particular, Benfante, Tesio and Castelli will report data on treatment outcomes of FM patients treated with brief psychodynamic therapy and cognitive therapy. Finally, Galli, Bottiroli, and Ghiggia will compare alexithymia and psychological distress in patients with FM and chronic migraine.

## NEW TREND IN PSYCHOSOMATIC ASSESSMENT: ECOLOGICAL MOMENTARY ASSESSMENT (EMA)

*Roberto Cattivelli (Dipartimento di Psicologia, Università di Bologna), Silvana Grandi (Dipartimento di Psicologia, Università di Bologna)*

Persistent somatic symptoms severely impair quality of life, becoming rapidly one of the most impactful health-related issues for the health care system. Psychological factors, such as catastrophizing, negative affectivity, and avoidance, are linked to these impairments and appear to maintain these somatic symptoms through dysregulation of both the psychological and biological systems, ultimately leading to a direct impact on individuals well-being. Ecological Momentary Assessment [EMA], which has been proven effective for chronic pain, nutrition, and other health-related contexts, represents an innovative data analytic approach compared to standard self-reported measures that can more easily lead to bias. Based on daily measurements through specific online applications, it allows for rapid, consistent, and bias-free measurements, and to draw very indicative pictures of the trend over time of a specific domain, especially by integrating it with direct measurements from e-health systems. Although more evidence is needed before resulting in a paradigm shift, the EMA approach appears to be a promising new way for data collection in the context of clinical psychology, health, and somatic symptoms detection: once set up it is ecological, informative, efficient and sustainable

## HEALTH OUTCOMES IN INTIMATE PARTNER VIOLENCE VICTIMS: A PRELIMINARY INVESTIGATION

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Intimate partner violence (IPV) includes a variety of abusive or aggressive behaviours in the context of romantic relationships and is associated with adverse social and health outcomes. This preliminary study aims to compare the mental and physical health of victims with different levels of psychological IPV (minor vs severe) and different forms of IPV (psychological vs both psychological and physical). An online-based survey was administered to 277 IPV victims who completed validated clinical scales. Individuals with severe psychological IPV reported significantly higher anxiety ( $p < .001$ ), depressive ( $p < .001$ ) and somatic symptoms ( $p < .001$ ), alexithymia ( $p = .05$ ), and pain intensity ( $p = .01$ ) than those with minor psychological IPV. Victims of both psychological and physical IPV experienced more physical abuse ( $p = .003$ ) and neglect ( $p = .003$ ) during childhood, worse levels of anxiety ( $p = .002$ ), depressive ( $p = .002$ ) and somatic symptoms ( $p = .002$ ), and pain intensity ( $p = .03$ ) than victims of psychological IPV. These preliminary results suggest that psychological violence is a serious form of IPV which may affect the physical and mental health of victims. Furthermore, the co-occurrence of multiple types of IPV can increase the severity of outcomes.

## EFFICACY OF SHORT-TERM PSYCHOTHERAPY IN PATIENTS WITH FIBROMYALGIA: A COMPARISON BETWEEN PSYCHODYNAMIC AND COGNITIVE THERAPY

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Fibromyalgia (FM) is a chronic pain syndrome, associated with anxiety/depressive symptoms and poor quality of life (QoL). A large body of evidence has proved the efficacy of cognitive-behavioural psychotherapy, whereas limited data are available for brief psychodynamic therapy (BPT). Therefore, we examined if brief psychotherapies could improve the levels of well-being and QoL in FM. Moreover, we investigated the efficacy of BPT, inspired by the Brief Dynamic Interpersonal Therapy model, with respect to cognitive therapy (CT). Sixty-one female FM patients were randomly assigned to one of the two short-term psychotherapies. Thirty patients attended BPT (16 sessions, 1 session/week) and 31 received CT (16 sessions, 1 session/week). Psychological measures, administered before (T0) and after the treatment (T1), included pain item of FIQ-R, HADS, and SF-36. There was a significant main effect of time in reducing pain intensity ( $F(1,59)=6.079$ ,  $p=.017$ ) and anxiety scores ( $F(1,59)=4.186$ ,  $p=.045$ ), and in improving both mental ( $F(1,59)=5.945$ ,  $p=.018$ ) and physical ( $F(1,59)=7.605$ ,  $p=.008$ ) component of QoL. No significant interaction between time and treatment was found. BPT was found to be as effective as CT in lowering anxiety symptoms and pain levels, and in improving QoL in FM patients.

## FIBROMYALGIA AND CHRONIC MIGRAINE: A CASE-CONTROL STUDY ON PSYCHOLOGICAL MECHANISMS

*Federica Galli (Sapienza Università di Roma), Sara Bottiroli (Università Giustino Fortunato), Ada Ghiggia (Università di Trieste)*

Chronic pain (CP) is a burdensome condition and a challenge for healthcare. The causes of CP are not clear, but ongoing evidence is about the interplay of neural mechanisms and psychological ones. Aim was to evaluate the prevalence and relationship between alexithymia and psychological distress in women with fibromyalgia (FM) or chronic migraine (CM) compared to healthy controls. A cross-sectional study was conducted. Two-hundred and fifty women with FM and 250 women with CM were assessed using the Toronto Alexithymia Scale (TAS-20) and Hospital Anxiety and Depression Scale versus Healthy controls (n=280). Differences between groups showed significantly higher levels of alexithymia [ $<.001$ ] and psychological distress [  $p<.001$ ] in FM compared to patients with CM and healthy controls. Post-hoc analysis showed that FM reported higher scores on the TAS compared to patients with CM and healthy controls ( $p<.001$ ). A moderation analysis was performed to examine the moderation effect of groups on the relationship between alexithymia and psychological distress. In addition to a strong relationship between alexithymia and distress, the group variable was a significant moderator. These findings might suggest a shared psychological dysregulation in patients suffering from FM and CM.

# CROSS-CULTURAL CHALLENGES FOR ASSESSMENT AND CLINICAL INTERVENTION

*Proponente: Igor Marchetti (Dipartimento di Scienze della Vita, Università di Trieste)*

Clinical and dynamic psychology is increasingly facing the challenge of dealing with people coming from different cultural backgrounds, such as migrants and non-Western individuals. However, little is known to what extent our theoretical models, assessment procedures, and clinical interventions are actually transferable. In our symposium, four talks will address this crucial topic. The first speaker will be Dr. Tessitore (University of Salerno), who will present quantitative-qualitative data on 36 Nigerian traumatized individuals, as assessed with her new Asylum Seekers Photographic Interview (ASPI). As second speaker, Dr. De Leo (Catholic University of Milan) will talk about body representation in 37 asylum seekers, as measured with the Machover Draw-a-Person Test (DAP Test). As third speaker, Prof. Marchetti (University of Trieste) will present data on over 1000 individuals in Burkina Faso, who were assessed with respect to their defense mechanisms, mental well-being, and psychosocial functioning. The fourth speaker will be Dr. Begotaraj (University of Rome – La Sapienza), who will show data about the effectiveness of expressive writing on 28 migrants, enrolled in a randomized controlled trial. Finally, Prof. Di Riso (University of Padua) will serve as discussant.

## THE ASYLUM SEEKERS PHOTOGRAPHIC INTERVIEW (ASPI): THE ROLE OF VISUAL-VERBAL STIMULI IN INCREASING NARRATIVE ORGANIZATION OF TRAUMATIZED ASYLUM SEEKERS

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The study shows the effectiveness and the clinical potentials of a new methodology, the Asylum Seekers Photographic Interview (ASPI), developed with the aim to increase the asylum seekers' meaning-making processes. The post-traumatic symptomatology of 36 Nigerian asylum seekers hosted in Italy was assessed. Participants were then randomly divided into two groups: an intervention group assessed by the ASPI and a control group assessed by a non-image-mediated narrative interview. Quantitative data were analyzed through a descriptive analysis; the interviews were analyzed according to various dimensions of narrative meaning-making processes. A multivariate analysis of variance was carried out to evaluate the significance of differences of narrative indexes between the groups. Statistically significant differences in several meaning-making categories emerged in the intervention group, caused by the only effect of "intervention vs control group" ( $F(8,25)=5.902$ ,  $p=.000$ ,  $\eta^2$  partial=.65). The effectiveness of visual-verbal stimuli for helping traumatized asylum seekers to increase their narrative organization and the clinical implications of using mediation devices in the research-intervention with vulnerable population will be discussed

## EXPLORING THE BODY REPRESENTATION OF FORCED MIGRANTS HOSTED IN THE ITALIAN RECEPTION CENTERS THROUGH THE MACHOVER DRAW-A-PERSON TEST (DAP TEST)

*Amalia De Leo (Università degli Studi della Campania 'Luigi Vanvitelli'), Paolo Cotrufo (Università degli Studi della Campania 'Luigi Vanvitelli')*

The body plays a leading role in the whole refugee experience of forced migrants; both before and after migration, the body is experienced as the most important resource on which depends not only the ability to cope with the risks related to migration transit but also the ability to adapt to the new host context. The aim of the study is to explore the body representation of forced migrants using Machover Draw-a-Person Test (DAP Test). The research involved 37 asylum seekers and beneficiaries of international protection (78.4% M and 21.6% F) hosted in 9 Italian reception centers. The DAP Test was administered during an individual interview session. Following the author's guidelines, the score of the subjects for the single areas was calculated and then an average of the scores of all the subjects for each area was carried out. The four clinical macro-areas where participants obtained most of the indices are: Adaptation-Sociality; Mental Retardation-Organicity; Negativism-Oppositionism; Acting out-Psychosis-Paranoia-Schizophrenia. Through the analysis of the drawings, it was possible to investigate at a deep level the refugee experience of forced migrants, with a focus on risk and resource aspects. The clinical implications will be discussed.



## DEFENSE MECHANISMS, WELL-BEING, AND PSYCHOSOCIAL FUNCTIONING IN THE AFRICAN CONTEXT

*Igor Marchetti (Dipartimento di Scienze della Vita, Università di Trieste), Michele Grassi (Università di Trieste), Ilaria Micheli (Università di Trieste)*

Defense mechanisms are defined as automatic psychological processes that protect the individual from painful emotions and thoughts. These phenomena have been associated with a variety of outcomes, such as mental well-being and psychosocial functioning. Despite their pervasive role, defense mechanisms have primarily been investigated in the Western world, while their structure and role in the African context is unknown. In our study, we first translated the Defense Styles Questionnaire-40 (DSQ-40) in the Dyula language and, then, administered it as a structured interview to over 1000 adults (32% females; mean age=25±8 years) in Burkina Faso. Several results are worth mentioning, First, pilot data on 40 individuals confirmed that our translation was fully understandable. Second, PCA analysis revealed a three-style structure of the interview, consisting of (i) neurotic style, (ii) immature style, and (iii) mature style. Third, the immature style was associated with depressive and anxiety symptoms as well as reduced psychosocial functioning. The neurotic and the mature styles were both associated with greater psychosocial functioning, while the former was also linked with more anxiety symptoms. Theoretical and clinical implications will be presented.

## THE EFFECTIVENESS OF EXPRESSIVE WRITING INTERVENTION ON PSYCHOLOGICAL HEALTH OF MIGRANTS: A MULTI-ARM RANDOMIZED CONTROLLED TRIAL

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The phenomenon of migration is related to adverse experiences that could lead to psychological distress and trauma symptoms. These evidences highlighted the need to plan effective psychological treatments to support migrants' mental health. In particular, the application of expressive writing intervention (EW) has not been examined in this population. Aim of the study was to evaluate the effectiveness of a trauma-focused EW on psychological distress, trauma symptoms, alexithymia, and hope for the future in migrants. Twenty-eight migrants were enrolled in a double-blind randomized controlled trial study that included three groups: trauma-focused EW, neutral EW, and control. Participants completed psychological measures at pre-intervention, immediately after the intervention, and at one month of follow-up. The participants of the trauma-focused EW showed an immediate improvement in phobic anxiety and positive total symptoms, and an improvement in somatization, global severity index, and hope for the future at follow-up. The findings showed that EW may be an effective tool for reducing migrant's distress and could led to long-term improvements of psychological health. Moreover, the results suggested the potential influence of the hope for the future on anxious symptoms in migrants.

## DETERMINANTS OF ADULTS' SENSITIVE RESPONSIVENESS TO CHILDREN'S AFFECTIVE NEEDS IN DIFFERENT FAMILY CONTEXTS

*Proponente: Simona de Falco (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia)*

Sensitive responsiveness to children's affective needs is the key aspect through which maternal and paternal caregiving promotes individual long-term healthy psychological development. For this reason, it is critical to understand factors that shape individual differences in adults' responsiveness towards children across multiple contexts. In this panel, we present studies investigating the determinants of maternal and paternal responsiveness assessed both at a global level - in terms of affective quality of parent-child bond - and at a microanalytic level - in terms of adults' processing of crucial infant signals. Specifically, the studies investigate the role of gender, caregiving involvement and alloparental care experiences by targeting: non-parents and parents, same- and different-sex families, parents with different degree of psychological wellbeing, and parents of children with neurodevelopmental disorders. Methodology encompasses standardized observation, self-report and computerized experimental tasks, often with a multimethod approach. Principal results highlight that contextual factors shape responsiveness to child affective needs over and above parent gender and emphasize the importance of targeting maternal and paternal responsiveness across diverse families.

## AFFECTIVE QUALITY IN MOTHER-CHILD AND FATHER- CHILD INTERACTIONS IN AUTISM SPECTRUM DISORDER

*Arianna Bentenuto (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Silvia Perzoli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia), Simona de Falco (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia)*

Positive and reciprocal parent-child interactions are crucial for child wellbeing in typical and atypical development but paternal role is receiving extended attention only recently (Cabrera, & Tamis-LeMonda, 2013; Flippin, & Watson, 2015, Cano, Perales, & Baxter, 2019). The aim of this study was to compare mother-child and father-child interactive behavior in families of children with ASD. A total of 152 parent-child interactions were coded using the Emotional Availability Scales (4th ed. EAS, Biringen et al. 2008), in fact this study involved 76 children with ASD (M chronological age=43.67 months, SD=11.22; M mental age=41.85 months, SD=11.38; 11 females), with their mothers and fathers. The results showed no significant differences between mothers and fathers in the mean level of affective quality scales and the scores fell in the moderate to good range. Also, there were no differences in the mean level of child scales with the two parents either. Interestingly, symptoms severity, but not cognitive functioning, resulted to be a significant predictor of child emotional availability ( $b=-0.645$ ,  $p<0.001$ ) with both parents. Similar levels of Emotional Availability (EA) might constitute a positive foundation on which to build early parent-child interventions involving both parents.

## PARENTAL SENSITIVITY AND CHILD ATTACHMENT SECURITY IN LESBIAN AND GAY PARENT FAMILIES THROUGH ASSISTED REPRODUCTION: DIFFERENCES BY PARENT GENDER AND CAREGIVING ROLES?

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Maternal, but not paternal, sensitivity is a significant precursor of child attachment in heterosexual parent families. In this family type, however, parent gender and caregiving role likely conflate, making it impossible to determine the unique contribution of each dimension. This study involved 34 lesbian mother families through donor insemination and 31 gay father families through surrogacy to compare and investigate the associations between parental sensitivity and child attachment security, by parent gender and caregiving roles. Sensitivity and child attachment security were assessed at t1 (Mage = 3 years) and t2 (Mage = 4 years), respectively, using the Maternal Behavior Q-Set and the Attachment Q-Sort, during two home visits at each time point. Both parental sensitivity and child attachment security were similar to normative scores. However, both the primary caregiver showed greater sensitivity and children displayed greater attachment security to their primary caregiver. Finally, the strength of the association between parental sensitivity and child attachment security by caregiving role was similar across family types. The results emphasize the importance to disentangle the caregiving role from parent gender while examining child-parent attachment across diverse families.

## ATTENTIONAL BIAS TOWARD INFANT CUES: WHICH CHARACTERISTICS OF PARENTS REALLY MATTER?

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Understanding parents' processing of infant cues is an important step in comprehending how caregiving practices arise. However, the prioritization of attention toward infants have been generally explored in mothers, and new family forms have been mainly left out of research. For this reason, we implemented an online task to examine differences in elaborating faces depending on family structure, sex, and caregiving involvement of parents from different- and same-sex families. 13 fathers and 13 mothers from different-, and 13 fathers and 13 mothers from same-sex families (N=52) were tested through a paradigm measuring the disengagement of attention from infant and adult emotional faces. The best linear model fitting RTs has been chosen based on Bayes Factor Analysis and Likelihood Ratio Test. Both family structure and parents' sex did not improve the model fit. Differently, the best LMM showed an effect of involvement ( $p < .05$ ) and an interaction effect between face type and involvement ( $p < .05$ ). Interestingly, more involved parents allocated more attention (i.e., slower RTs) toward infant faces. Overall, our findings highlight the importance of caregiving involvement in attentional bias toward infants and the possibility to disentangle gender from caregiving role in same-sex parents.

## MATERNAL SPEECH CHANGES AFTER A PARENT MEDIATED INTERVENTION

*Silvia Perzolli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia), Giulio Bertamini (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Arianna Bentenuto (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

The role of parents in the therapeutic setting is fundamental for both child affective and cognitive outcomes (Althoff, 2019). The main purposes of the current study were to explore how the maternal speech directed to preschool children with ASD changed after a period of 14 months of intervention and to investigate how maternal and child affective characteristics impact maternal speech. Participants were 22 mothers in interaction with their children with ASD (Chronological age:  $M = 43.77$  months;  $SD = 13.60$ ; Mental age:  $31.99$  months;  $SD = 12.07$ ). Functional aspects of speech have been analyzed pre-and post-intervention during 10-min free play interactions that were verbatim transcribed through ELAN (Version 6.2,2021) and coded with Penman code (Bornstein et al.,1992). Affective quality was measured through the Emotional Availability Scales (Biringen et al., 2008). Data analyses reveal a significant increase in the affective function ( $t(21) = -2.05$ ;  $p = 0.05$ ) and in the number of descriptions of actions ( $t(21) = -2.35$ ;  $p = 0.03$ ). Mixed linear models show the impact of affective domains on maternal speech. Parent-mediated intervention helps the promotion of social reciprocity and supports mothers to use more affective language, a crucial element for the quality of the dyadic exchange.

## HOW DOES ALLOPARENTAL CARE EXPERIENCE SHAPE THE EMOTIONAL RESPONSE TO THE INFANT CRIES CHARACTERIZED BY INCREMENTAL DISTRESS: A PRELIMINARY STUDY

*Paola Rigo (Università degli Studi di Padova), Alessandra Simonelli (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Previous experiences of care influence adults responses to infant cries (IC). While difference has been shown between parents (P) and non-parents (NP), few studies have focused on the influence of alloparental care experiences (APE) in modulating the responsiveness to IC in both P and NP. This study evaluates whether APE contributes to: reducing distress and negative feelings perceived by the listener, increasing prosocial feelings; even towards sustained (potentially aversive) crying; supporting responsiveness in situations of low psychological well-being. 80 adults (recruitment in progress), balanced by gender and parental status, undergo a listening task of IC - with variable duration - to evaluate the sounds according to psychological dimensions that can be grouped into three categories: perceived distress, caring behaviors, negative and prosocial feelings. Participants psychological well-being and APE are assessed. Additionally, the parents evaluate the experience of caring for their child. From preliminary findings (female NP), while high anxiety reduces prosocial feelings, APE increases reactivity and prosocial emotion toward long IC. Future analyses focused on the whole sample can also help understand the role of APE in parent adjustment and responsivity to own child.



## **EFFECTS OF DIFFERENT PSYCHOLOGICAL TREATMENTS AND BENEFIT FINDINGS DURING AND BEYOND COVID-19**

*Proponente: Ilaria Chirico (Dipartimento di Psicologia, Università di Bologna)*

This symposium provides an overview of some innovative treatments and new developments in clinical practice during and beyond the COVID-19 pandemic. In the first contribution, Minazzi evaluated the effectiveness of the 'Adventure Therapy', a new educational and rehabilitation program carried out onboard a sailing ship and funded by 'Tender To Nave Italia Foundation'. In the second contribution, Druda conducted a systematic review focused on the long-term effects of cognitive training across different populations (older adults with or without MCI/dementia), an issue which has been little studied. The third contribution, by Poli, explored benefit findings in response to COVID-19 in a sample of young adults with multiple sclerosis (yawMS). Interestingly, yawMS found almost one benefit related to personal, relational or existential post-traumatic growth. In the fourth contribution, Grosso conducted a systematic review and a meta-analysis of studies about the relationship between mindfulness disposition and psychological outcomes during COVID-19. Overall, findings will offer insights into the effects of both more traditional and innovative interventions which, as to be effective, should always be tailored on patient-specific psychological conditions.

## THE PROTECTIVE ROLE OF MINDFULNESS IN TIMES OF THE COVID-19 PANDEMIC

*Francesca Grosso (Università Cattolica del Sacro Cuore - Early Career Researchers Network (E-CARE) of the AIP)*

The outbreak of the COVID-19 pandemic led to unprecedented changes such as restrictions on personal freedom confronting people with different stressors (Singh et al., 2020). The study aims to review and performs a meta-analysis of studies about the relationship between mindfulness disposition and psychological outcomes during the COVID-19 pandemic. Ten electronic databases were searched from November 2021 to March 2022. A systematic review and a meta-analysis were conducted. Forty-four studies were included in the meta-analysis, and 15 studies were considered for the qualitative synthesis. Pearson correlations analysis was conducted. Anxiety and dispositional mindfulness were found to be moderately negatively correlated ( $r = -0.397$ ;  $p < 0.001$ ), as well as depression and dispositional mindfulness ( $r = -0.323$ ;  $p < 0.001$ ). A weak negative correlation was found for both psychological distress ( $r = -0.201$ ;  $p = 0.002$ ) and the COVID-19 related fears ( $r = -0.136$ ;  $p < 0.001$ ). Longitudinal studies included in the systematic review also suggest the stability of these associations over time. Mindfulness disposition is negatively associated with anxiety, stress, fears, and depression during the COVID-19 pandemic. Mindfulness represented a protective factor against negative psychological reactions.

## INVOLUNTARY PSYCHIATRIC TREATMENT DURING THE COVID-19 PANDEMIC. AN INTERNATIONAL QUALITATIVE STUDY

*Agostino Carbone (London School of Economics), Martin Knapp (London School of Economics, UK)*

Over the past two years, the COVID-19 pandemic has had a profound psychological impact on the world population, especially those suffering from mental illness and psychological distress. The purpose of this research is to investigate the use of psychiatric compulsory treatments in different national contexts in the first and subsequent phases of the COVID-19 pandemic. Nine key people were interviewed among health care professionals within mental health services and among eminent scholars of Mental Health Care and Clinical Psychology. The survey covered four countries: Italy, Greece, China and Chile. Data analysis was conducted through Grounded Theory Methodology. The coding process of the interviews highlighted four final core themes: a) the culture of psychiatric care services, b) the effect of the pandemic on involuntary hospitalizations, c) special hospitalization procedures to reduce the spread of infection, d) policies and suggestions for more inclusive mental health treatments. During the first wave of the pandemic (March-May 2020), respondents reported a general decrease in the use of involuntary treatments, while a gradual increase was found in the following months.

## TENDER TO NAIVE ITALIA: AN EXPLORATORY STUDY ON THE EFFECTS OF ADVENTURE THERAPY ABOARD THE BRIG ITALIA

*Giacomo Andrea Minazzi (Università Cattolica del Sacro Cuore - Early Career Researchers Network (E-CARE) of the AIP)*

Every year, Tender To Nave Italia Foundation realizes almost 20 educational and rehabilitation projects that carries out on board a sailing brig, based on the Adventure Therapy methodology. This project aims to investigate whether there are any effects reported subjectively by the participants in relation to: levels of mindfulness, predisposition to negative self-aware emotions, quality of life, empowerment, recovery, locus of control, psychological general well-being. 20 groups of 10 participants are being assessed through a battery of tests in three times: T0: 1 month before boarding; T1: right before boarding; T2: at disembarkation; T3: at a two months follow-up. Consistently with the literature, we expect to find an improvement in the levels of empowerment, self-efficacy, PGWB and QoL after the embarkation period (T2-T3). We expect that high levels of mindfulness and low levels of predisposition to negative self-aware emotions will correlate with better outcomes and higher scores in T2 and T3. Significant differences in the selected variables will offer insights to remodel and improve future programs tailored to the psychological characteristics of the participants.

## YOUNG ADULTS WITH MULTIPLE SCLEROSIS SAILING THROUGH COVID-19: BENEFIT FINDING AND POST TRAUMATIC GROWTH

*Silvia Poli (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona)*

Having to navigate the “COVID-19 storm” has been widely recognized as a significant psychological stressor for the general population. However, metaphorically speaking, not all boats are the same and the literature highlighted that being young and having a chronic illness are some of the risk factors of distress. Although young adults with multiple sclerosis (yawMS) might be considered a vulnerable population, they might also be able to adapt to stress and find meaning in adverse life events. The present study aimed to explore benefit finding in response to the pandemic in a sample of yawMS. As part of a larger project, data were collected using a cross-sectional, web-based survey. Benefit finding was analysed using a qualitative thematic approach; descriptive and inferential statistics were performed. Out of 247 respondents with mostly relapsing-remitting MS, 199 (31.9±6.97 years) reported at least one benefit. Qualitative analysis showed that during the pandemic yawMS found benefits related to three themes: personal growth, relational growth, and existential growth. No differences in benefit finding were found between age sub-groups (18–30 vs. 31–45). Participants reported a wide range of benefits, some of which seem to be specific to MS or the pandemic.

## EMBODIMENT IN PSYCHOPATHOLOGY, ASSESSMENT AND TREATMENT

*Proponente: Arianna Palmieri (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

The embodiment, as philosophically and ontogenetically conceived in its radical form, will be declined in the present symposium through three crucial dimensions of clinical research. Pagnini will firstly introduce an original theoretical perspective -and its implications- based on Bayesian brain model, focusing on placebo/nocebo effects and the role of somatosensorial information. From psychopathological standpoint, Gennaro will discuss the role of traumatic experience in affective regulation as measured on 52 individuals through affective salience index, narrative features, and affective (psychophysiological) arousal. The assessment perspective will be provided by Andò and colleagues (Fossataro, Garbarini), who will present a study on Rorschach stimuli and Motor Evoked Potentials (MEP), showing that during exposure to the inkblots, a “feeling of movement” occurred even before participants had time to formulate their responses. Finally, Palmieri and Kleinbub, with colleagues (Pick, Ruffin, Brasini), will show their findings on interpersonal physiology and the both macro and micro-processual level of psychotherapy transcripts analyses on 17 dyads, suggesting eligible constructs underling skin conductance synchronization phenomena occurring during clinical interaction.

## RORSCHACH STIMULI, FEELING OF MOVEMENT, AND MOTOR EVOKED POTENTIALS (MEPS)

*Agata Andò (Dipartimento di Psicologia, Università degli Studi di Torino), Carlotta Fossataro (Dipartimento di Psicologia, Università degli Studi di Torino), Francesca Garbarini (Dipartimento di Psicologia, Università degli Studi di Torino)*

Using TMS, we investigated whether the Rorschach cards can affect the excitability of the motor cortex by measuring the amplitude of motor evoked potentials (MEPs). Twenty-two healthy right-handed subjects (11 males and 11 females ) were recruited from the Department of Psychology of the University of Turin (Italy) and were aged between 21 and 41 years ( $M=25.31$ ;  $SD =4.02$ ). Transcranial magnetic stimulation (TMS) was applied over the Left Primary Motor Cortex (M1)-at a protocol intensity of 115% of resting motor threshold (rMT)-and electromyography (EMG) activity was recorded from First Dorsal Interosseous (FDI) and Abductor Pollicis Brevis (APB) of the right hand. Rorschach stimuli were presented using E- PRIME software, while subjects were asked how much feeling of movement they had (from 1 to 9). Our results showed that during exposure to the Rorschach inkblots, a feeling of movement occurred very early, even before participants had time to formulate their responses. Differences were found between the E-prime and Rorschach conditions for the high and low frequency human movement (M) Rorschach cards obtained by the E-prime and Rorschach conditions. Nevertheless, the association between M responses and the MEP amplitude modulation was relatively weak.

## TRAUMA, AFFECTS AND INDIVIDUAL'S NARRATIVE

*Alessandro Gennaro (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Affect plays a major role in individual's daily life, driving the sensemaking of experience, psychopathological conditions, social representations of phenomena and ways of coping with others. Different research work focused the role of trauma in affective regulation and have been traditionally investigated through physiological, self-report, and behavioral measures. The present contribution focus the role of trauma in affective regulation through a text-based measure detecting affect intensity: the Affective Saturation Index (ASI). Fiftytwo individuals completed the Childhood Trauma Questionnaire (CTQ) and a non-clinical semi-structured interview. For each interview transcript, the affective intensity (ASI) was esteemed and compared to individual's physiological index of propensity to affective arousal (HRV), semantic complexity (SEI), and lexical syntactic complexity (FVI). According to CTQ respondents were split into two different groups (abuse vs non abuse experience). Finally, Anova and regression models tested the role of trauma in affecting individual's arousal/ physiological characteristics, affect managing, and narrative features. In its whole, the work outlines the role of trauma in producing different affective activation and supports ASI convergent validity.



## PLACEBO AND NOCEBO RESPONSES AS BAYESIAN BRAIN PHENOMENA: THE ROLE OF LIKELIHOOD AND ATTENTION

*Francesco Pagnini (Università Cattolica del Sacro Cuore)*

The Bayesian brain framework applied to placebo responses and other mind-body interactions suggests that the effects on the body result from the interaction between priors, such as expectations and learning, and likelihood, such as somatosensorial information. Significant research in this area focuses on the role of the priors, but the relevance of the likelihood has been surprisingly overlooked. The likelihood can be manipulated by paying attention to sensorial information. Two forms of attention seem particularly relevant in this framework: mindful attention, which is characterized by a focus on sensory information at the present moment and a reduction of priors influence; and direct attention, which can be consistent with the priors, or directed toward the opposite direction (inconsistent). Attention may need a spot, together with expectations and learning, as a main player in the placebo research. That implies an increased involvement of the individual in the care process, along with the opportunity to achieve an active role in shaping one's own health, by leveraging these attentional strategies.

## INTERPERSONAL PHYSIOLOGY AND THERAPIST INTERVENTIONS: CONVERGING MICRO AND MACRO PROCESS PERSPECTIVES

*Arianna Palmieri (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Emanuele Pick (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Davide Ruffin (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Maurizio Brasini (Dipartimento di Psicologia, Università degli Studi di Roma 'G. Marconi'), Johann Roland Kleinbub (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

Physiological Synchronization (PS) between patients and therapists electrodermal signals has been proposed as a biomarker of empathy, alliance, and affective attunement. Yet existing studies have only explored these associations through nomothetic and correlational designs. In the present study we explore the association between PS and therapist interventions through both macroprocessual and microprocessual observational levels. Video and skin-conductance were recorded in 17 sessions of different psychotherapies. PS was calculated through the AMICo algorithm. Verbatim transcripts were coded with the Psychodynamic Intervention Rating Scale (PIRS) classifying therapists' interventions along the expressive-supportive continuum. We expected to find an association between PS and PIRS's Reflection and Self-Disclosures. Microprocess results showed that self-disclosure episodes, but not reflections, predicted higher PS ( $p = 0.025$ ), whereas macroprocess analyses highlighted a correlation between each session's median PS and the frequencies of both self-disclosures ( $r = 0.54$ ) and reflections ( $r = 0.46$ ). These results increase confidence for PS as an embodied marker of clinical process, showing that nomothetic results can be traced back to specific episodes.

## PROMOTING EMERGING AND YOUNG ADULTHOOD MENTAL HEALTH: PREVENTION AND TREATMENT PROGRAMS

*Proponente: Gioia Bottesi (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Centro Ateneo dei Servizi Clinici Universitari Psicologici, Università degli Studi di Padova)*

Emerging and young adulthood entail critical transitions and heightened vulnerability to psychopathology. Such a scenario outlines the need to develop effective prevention and treatment programs aiming to promote mental health. The present symposium illustrates recent findings in this field. Specifically, Silvia Cerea will provide data about the efficacy of an online psychological intervention focused on functionality appreciation in enhancing positive body image and intuitive eating in young females. Gioia Bottesi will show preliminary results of a single-case study design evaluating the effectiveness of a transdiagnostic CBT group intervention delivered to university students referring difficulties tolerating uncertainty. Chiara Conti will describe the effectiveness of a 5-session individual counselling intervention in reducing psychological distress and increasing self-esteem and self-efficacy in a sample of treatment-seeking undergraduates. Lastly, Andrea Pozza will focus on a systematic literature review about the effectiveness of early psychological interventions on post-traumatic stress disorder in young women who experienced intimate partner violence. Overall, evidence from these contributions will expand current knowledge about intervention options for this population.

## PRELIMINARY EVALUATION OF THE EFFECTIVENESS OF A TRANSDIAGNOSTIC CBT GROUP INTERVENTION TARGETING INTOLERANCE OF UNCERTAINTY IN UNIVERSITY STUDENTS

*Gioia Bottesi (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Centro Ateneo dei Servizi Clinici Universitari Psicologici, Università degli Studi di Padova), Sara Anastasia Contin (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Centro Ateneo dei Servizi Clinici Universitari Psicologici, Università degli Studi di Padova), Eleonora Carraro (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Centro Ateneo dei Servizi Clinici Universitari Psicologici, Università degli Studi di Padova), Sara Bianconi (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Centro Ateneo dei Servizi Clinici Universitari Psicologici, Università degli Studi di Padova), Anna Panzeri (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Intolerance of Uncertainty (IU) is a vulnerability factor for several psychological disorders, and it may constitute an important target of transdiagnostic interventions. The present study aimed to preliminary evaluate the effectiveness of a transdiagnostic CBT group intervention delivered to 7 university students with difficulties tolerating uncertainty. To pursue this aim, we used a single-case experimental design over 3 phases: baseline, intervention (8 weeks) and follow-up (8 weeks). The primary outcome measures were assessed via daily self-monitoring from baseline until the end of follow-up. Secondary outcome measures were scores on the Intolerance of Uncertainty Scale-Revised and the Depression Anxiety Stress Scales-21. Overall, participants showed reductions in self-monitored levels of perceived uncertainty and uncertainty distress and increasing levels of confidence in their ability to manage uncertainty over the 3 phases. Scores on self-report measures further supported decreasing levels of IU and general distress across time. Despite preliminary, current findings support the effectiveness of a transdiagnostic group intervention targeting IU in university students.

## PROMOTING A POSITIVE BODY IMAGE IN YOUNG FEMALES WITH THE MORE THAN BODY APPEARANCE (MBA) INTERVENTION: A RANDOMIZED CONTROLLED TRIAL

*Silvia Cerea (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Beatrice Burdisso (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Paolo Mancin (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Marta Ghisi (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Positive body image (PBI) is a protective factor for the development of Eating Disorders (Piran, 2015). This study investigates the efficacy of an online psychological intervention focused on functionality appreciation in enhance PBI and intuitive eating (IE) in young females. One hundred and forty-three young females were randomized into two groups: experimental group (n = 69) and waiting-list group (n = 74). The experimental group started the intervention at baseline (T0) for 15 days (until T1). The waiting-list group waited for 15 days before starting the intervention (T1 to T2). Participants completed questionnaires about PBI (Functionality Appreciation Scale, FAS; Body Appreciation Scale-2, BAS-2) and IE (Intuitive Eating Scale-2, IES-2) at baseline (T0), 15 days from baseline (T1), and 30 days from baseline (T2). Repeated measure Analyses of Variances (ANOVAs) showed Group (experimental vs. waiting-list) x Time (T0 vs. T1) interactions on FAS ( $p < .001$ ), BAS-2 ( $p = .004$ ), and IES-2 RHSC ( $p = .004$ ), indicating an increase in PBI and in trust in internal hunger/satiety cues in the experimental group compared to the waiting-list at T1. A 15-days intervention focused on functionality appreciation may enhance PBI and IE in young females.

## PROMOTING MENTAL HEALTH IN UNIVERSITY STUDENTS: THE G. D'ANNUNZIO COUNSELLING SERVICE EXPERIENCE

*Chiara Conti (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Martina Camelio (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Alessia Cipriano (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti), Mario Fulcheri (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The counselling service of the University G.d'Annunzio of Chieti-Pescara has been active since October 2021 and, at the present, has received 220 request of help by the students of the university. The most common reasons to contact the service concern anxiety symptoms, loneliness and relational difficulties, along with a significative decrease in self- efficacy in the academic context. Through a 5-session of individual counselling, the service psychologists have been able to reduce the symptomatology, strengthen self-esteem and self-ef- ficacy, as demonstrated by the results obtained by patients at the CORE-OM, a measure of well-being that is administrated at the beginning, at the end of the counselling pathway and during the follow-up session, provided after two months. Notwithstanding, a severe distress emerged from the interviews, 15% of patients reported cases of self-harm or suicidal ideation, more than a half reported serious adaptation difficulties, suggesting that the COVID-19 pandemic may have exacerbated and brought out significative mental health issues. Therefore, despite the effectiveness of the counselling service, urgent measures are needed at a local and national levels, to meet the specific needs of this particular and vulnerable population.

## THE ROLE OF THE CLINICAL PSYCHOLOGIST IN ONLINE COGNITIVE-BEHAVIORAL INTERVENTIONS: THE CLINICAL EXPERIENCE OF A LISTENING, COUNSELLING AND PSYCHOLOGICAL SUPPORT SERVICE FOR YOUNG PEOPLE

*Laura Giusti (Università degli Studi dell'Aquila), Silvia Mammarella (Università degli Studi dell'Aquila),  
Sasha Del Vecchio (Università degli Studi dell'Aquila)*

Many scientific evidences showed the negative impact of COVID-19 pandemic and social confinement on psychological well-being of young people (Giusti et al. 2020, 2021). The pandemic has necessarily led to a different way of working by clinical psychologists and, in the emergency context, the use of digital tools has replaced the face-to-face therapeutic approach. The Cognitive-behavioral therapy (CBT) has been proposed as a preferential treatment to be provided through the use of technologies, facilitating access to care and a decrease in dropout in young people (Nordh et al., 2017). From March 2020 to April 2022, the SACS #ioresto-acasa Project, the online version of the Listening and Consultation Service for SACS Students of the University of LAquila, included 353 help-seeking university students on a virtual platform. The digital platform included (1) digital narrative diary; (2) messaging and video-counseling sessions; and (3) a structured CBT program for anxiety. The students who reported high levels of anxiety underwent a digitized Cognitive behavioral program for anxiety. Currently, 232 students undergo digitized treatment. The results of the ongoing project emphasize the importance of encouraging the delivery of online interventions in clinical practice.

## EARLY PSYCHOLOGICAL INTERVENTIONS FOR PTSD IN YOUNG WOMEN VICTIMS OF INTIMATE PARTNER VIOLENCE: A SYSTEMATIC REVIEW

*Andrea Pozza (Università degli Studi di Siena), Barbara Barcaccia (Sapienza Università di Roma - Associazione di Psicologia Cognitiva APC e Scuola di Psicoterapia Cognitiva), Malgorzata Dragan (University of Warsaw, Poland)*

Women who have experienced intimate partner violence (IPV) have a greater risk of PTSD. This paper describes a systematic review about the effectiveness of early psychological interventions on PTSD in young women IPV victims. Studies were included if conducted with any design on young female IPV victims who received a psychological treatment/prevention PTSD program. Sixteen studies were included (more than 2,000 young women, mean age 36.81 years). Eight studies showed the effectiveness of cognitive behavioral therapy (CBT) up to 6-month follow-up with medium-large effect sizes on post-traumatic symptoms, related clinical features (depression, guilt, anxiety, shame) and protective variables (self-esteem, quality of life, social support). In the CBT studies, the therapeutic components were exposure therapy to trauma, psychoeducation about PTSD, relaxation and problem-solving techniques aimed at increasing women's affective independence. Cognitive restructuring and assertiveness training directed at the negative internal self-talk typical of PTSD were further strategies. IPV is a highly topical issue, early psychological interventions on PTSD in this at-risk population, foresee a multiplicity of strategies, mainly cognitive behavioral, with promising effectiveness evidence.



# EATING DISORDERS AND EMOTIONS: FROM RESEARCH FINDINGS TO IMPLICATIONS FOR TREATMENT

*Proponente: Attà Negri (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Among serious psychiatric illnesses, eating disorders (EDs) are recognized to prominently involve the mind-body relationship and, as such, emotions assume a crucial role in the onset and maintenance of symptoms (Levinson, Williams, & Christian, 2020; Racine & Horvath, 2020; Rojo-Bofill, Arribas-Saiz, & Rojo-Moreno, 2018). The aim of the symposium is to shed light on the processes of emotion expression, regulation, and dissociation that characterize the subjective experience of patients with EDs. The work of Caldiroli and colleagues conducted a thematic analysis of the literature on the role of alexithymia in EDs, and specifically in anorexia nervosa. Cella and colleagues' study investigated the combined role of alexithymia, emotion dysregulation, and dissociation in the relationship between narcissism and binge eating in adolescents. Mariani and colleagues investigated the emotional regulation and symbolization processes in autobiographical narratives of patients with restrictive anorexia nervosa. Negri and colleagues' study investigated the characteristics of shame expression in ED patients narratives elicited through shame-related images. All contributions highlighted the implications for treatments of these research findings on emotional processing in EDs.

## THE ROLE OF ALEXITHYMIA IN PATIENTS WITH EATING DISORDERS: THEMATIC ANALYSIS OF THE LITERATURE, WITH A FOCUS ON ANOREXIA NERVOSA

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Since the nineties, within the eating disorders domain, many studies showed higher alexithymic traits in patients than controls, thus considering alexithymia as a crucial maintaining factor of these disorders. Alexithymia is a construct characterized by difficulties in identifying one's feelings and describing these feelings to others, limited imaginative processes, and externally oriented thinking rather than thinking about the internal world. The thematic analysis of the literature on this topic focused on two aims: (I) to understand whether anorexia nervosa, among other clinical features, is characterized by higher levels of alexithymia when compared with general population; (II) to understand whether alexithymia specifically characterizes anorexia nervosa, particularly when compared with other eating disorders (i.e. bulimia nervosa). From the analysis of the selected literature, high levels of alexithymia were found in anorexia nervosa, underlining a crucial connection between these features. However, there is no actual difference found with other eating disorders. At the clinical level, therefore, it is essential to keep in mind that alexithymia is a critical factor to be treated during eating disorders therapy.

## EXPLORING MEDIATION PATHWAYS IN THE RELATIONSHIP BETWEEN NARCISSISM AND BINGE EATING IN ADOLESCENCE: THE ROLE OF ALEXITHYMIA, EMOTION DYSREGULATION AND DISSOCIATION

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Narcissism vulnerability, alexithymia, difficulties in emotion regulation and dissociation are correlated with each other and are associated with binge eating among adolescents. However, no studies have yet examined all these variables simultaneously. The current study aims to test the independent and combined influences of such constructs on binge eating severity using a structural equation modelling. A sample of 194 students aged between 12 and 16 ( $M=15.42$ ,  $SD=2.06$ ) years was screened by means of self-report questionnaires. The model was statistically significant ( $\chi^2(2) = 2.599$ ,  $p = .027$ ;  $RMSEA = .040$ ;  $CFI = .998$ ;  $TLI = .967$ ;  $SRMR = .022$ ), explaining 37% of the variance. Results indicate that narcissism vulnerability was indirectly related to binge eating severity through its relationship with difficulty identifying and describing feelings, emotion dysregulation and dissociative experiences. Findings provide preliminary support for a model of risk factors for binge eating and suggest the possible mechanisms through which fragility in the sense of self contribute to developing dysfunctional eating pattern. Treatment and prevention programs should consider the role of dissociation and improve emotion regulation capabilities.

## ANOREXIA NERVOSA FROM LINGUISTIC POINT OF VIEW: EMOTIONAL REGULATION AND SYMBOLIZING PROCESS IN THE ASSESSMENT PHASE

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The research aims to analyze the emotional regulation and symbolizing process in autobiographical narratives in patients with restrictive Anorexia Nervosa (AN) disorder compared to not-clinical group. The project is framed in a mind-body integration by Buccis Multiple Code Theory (2021). We assume AN patients will show higher emotional dysregulation and dysfunctional linguistic pattern in their Referential Process (RP), during narratives. The sample is composed by 29 AN female patients (M= 9,8y ds= 4,1) recruited in hospital and 36 female not-clinical group (M= 21y ds= 2,4). The RP linguistic measures have been applied to the Relationship Anecdotes Paradigm Interviews transcriptions, also a set of self-report measures, Toronto Alexithymia Scale (TAS-20), Profile of Mood of State (POMS), Emotion Regulation Questionnaire (ERQ), have been administered. A T-test for paired samples was applied, AN patients showed significantly higher emotional dysregulation, specifically ANs showed higher ER expression/suppression, fewer functional cognitive strategies, higher alexithymia, higher mood dysregulation. The RP in AN patients autobiographical narratives showed a specific pattern coherent to emotional dysregulation, confirming the relationship between emotion and symbols.

## MAKING EXPLICIT AND ADDRESSING SHAME IN EATING DISORDERS

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Shame is an emotion that has begun to be recognized for its role on psychopathology and its impact on access to treatment. In patients with eating disorder (ED) pathology, this role and impact are certainly important because of the self and others' judgment towards the body. In this study we sought to intensively investigate shame through a narrative projecting test to detect the complex and multifaced expression of this feeling in ED patients. We used the Thurston Cradock Test of Shame (TCTS) to compare levels of internalized shame in 40 ED patients with levels of shame in 100 nonclinical individuals. ED patients' narratives had more shame contents ( $F = 12.59, p = .004$ ), expressed more directly ( $F = 8.18, p = .009$ ), with less aggressive defenses ( $F = 5.54, p = .027$ ) and more maladaptive story resolutions ( $F = 4.72, p = .046$ ). Results highlight the role played by shame in the maintenance of dysfunctional eating behaviors. Eliciting narratives with shame-related stimuli is one way to develop metacognitive skills about this highly disabling emotion in interpersonal relationships and build an effective working alliance at the beginning of treatment.

## THE FAMILY IN ANOREXIA NERVOSA: FROM AETIOPATHOGENESIS TO MAINTENANCE PERSPECTIVE. WHAT TO FOCUS ON PLANNING AN INTERVENTION FOR PARENTS

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Only an intervention really based on the specific needs and difficulties of families may transform parents into an effective resource and ally for the care process in the struggle against AN. The aim of the study is twofold: 1) to look at specific features or patterns that may characterize AN families, and 2) to detect these aspects that should be taken into consideration when we involve AN parents in the treatment pathway. We investigated 97 young women and 145 parents. Patients were administered a series of questionnaires investigating psychological health, perceived expressed emotion; while parents underwent caregiver skills scale and the perceived impact of eating disorder symptom scale. Patients, compared to controls, are in most cases second-born, and perceived higher expressed emotion in both parents. In this group parents showed higher psychological distress (mothers), a high impact of eating symptoms in family functioning, guilt, social isolation, and reduced self-care. In line with the Academy for Eating Disorders' position paper, our findings support the importance of not blaming parents, and indeed improving their psychological well-being, reducing their social isolation and enhancing their self-care.

# MULTIDIMENSIONAL CLINICAL TREATMENTS FOR CHRONIC DISEASES: NEW PERSPECTIVES OF RESEARCH AND INTERVENTION

*Proponente: Mauro Cozzolino (Dipartimento di Scienze Umane, Filosofiche e della Formazione, Università degli Studi di Salerno)*

Chronic diseases, being the result of a multifactorial combination of genetic, physiological, environmental and behavioral components, represent a major challenge for clinical psychology in the healthcare area. Evidence suggests that mental illness play a key role among chronic diseases risk factors, however, their complex nature and management needs even more for multidimensional and integrated clinical interventions that might be able to combine different kind of variables, biomedical as well as psychological. The symposium aims to reflect on the multidimensional nature of clinical practices for chronic diseases, shedding light on tasks, challenges and new perspectives of research and intervention with different kind of chronic patients in order to understand the new contributions and possible directions that clinical psychology has undertaken and might give in this field.

## MENTAL PAIN AND PAIN PRONENESS: THE MULTIDIMENSIONAL NATURE OF MIGRAINE

*Fiammetta Cosci (Dipartimento di Scienze della Salute, Università degli Studi di Firenze)*

The aim of the present study was to investigate migraine patients enrolled at a tertiary care unit to study suffering and pain behaviors, thus identifying potential risk factors for migraine. An observational cross-sectional study was carried out on patients with chronic migraine (CM), episodic migraine (EM), and healthy subjects (HS). A comprehensive assessment of migraine disability, psychological and psychosomatic variables was performed. Three hundred subjects were enrolled (100 CM, 100 EM, 100 HS). Based on the multiple regression analyses, those presenting higher levels of psychological distress (OR=1.15, 95%CI 1.03-1.28) and proneness to pain (social impairment: OR=3.59, 95%CI 1.14-11.29; depressive symptoms: OR=3.82, 95%CI 1.74-8.41) were more likely to be CM than HS. Those with higher levels of proneness to pain (social impairment: OR=4.04, 95%CI 1.60-10.22; depressive symptoms: OR=2.02, 95%CI 1.26-3.24) were more likely to be EM than HS. Those presenting higher levels of mental pain were more likely to be CM than EM (OR=1.45, 95%CI 1.02-2.07). Migraine is a disease associated with psychosocial manifestations. Mental pain mostly differentiates chronic from episodic migraine.



## MIND-BODY TRANSFORMATIONS-THERAPY (MBT-T) IN BREAST CANCER PATIENTS: CLINICAL AND INFLAMMATORY EFFECTS WITH PSYCHOSOCIAL GENOMICS APPROACH

*Mauro Cozzolino (Dipartimento di Scienze Umane, Filosofiche e della Formazione, Università degli Studi di Salerno), Giovanna Celia (Dipartimento di Economia, Management e Territorio, Università degli Studi di Foggia)*

Several studies have highlighted the key role of chronic inflammation in breast cancer development, progression and therapeutic outcome. These processes are mediated by various cytokines. Recent findings suggest that therapeutic mind-body protocols, can reduce the expression of genes associated with inflammation and stress-related pathways. An interventional, non-pharmacological, randomized study on patients with breast cancer was carried out to validate the genomic and epigenetic effects of the mind-body transformations technique (MBT-T). 28 patients were recruited at the end of the standard adjuvant treatments. Patients were randomly assigned to standard follow-up (control arm) or to the standard follow-up + MBT-T intervention (experimental arm). The experimental procedure requested the addition of a biweekly psychological treatment lasting 4 months. The blood samples have been collected before the treatment, 1 h after, 2 months after and at the end of it. Our preliminary results seem indicate that MBT-T induce a reduction of the release of different cytokines and chemokines in the breast cancer patients compared to a control group. This research underlining the importance of integrated mind-body protocols for improving the outcome in breast cancer.

## IMPULSIVE-COMPULSIVE BEHAVIOURS IN PATIENTS WITH PARKINSON'S DISEASE: INVESTIGATING THE ROLE OF PSYCHOLOGICAL DISTRESS

*Elisa Di Rosa (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Fabiana Ruggiero (Policlinico di Milano Ospedale Maggiore | Fondazione IRCCS Ca' Granda), Valentina Cardi (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Margherita Pirondini (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Nicky Edelstyn (School of Psychology, Keele University, UK), Daniela Mapelli (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

The present study investigated the relation between pandemic-related psychological distress and impulsive compulsive behaviors in patients with Parkinson's disease (PD). Fifty-nine PD patients answered the questions of a semi-structured clinical interview, evaluating psychological and physical health. The Questionnaire for Impulsive - Compulsive Disorders in Parkinson's Disease - Rating Scale (QUIP-RS) and the Depression Anxiety Stress Scales-21 (DASS-21) were also employed. Data revealed that 59% of the patients reported worse motor symptoms, increased cognitive, sleep difficulties and loneliness feelings (83%; 86.5%; 75%), as well as lower mood (62%) during the pandemic. The DASS-21 scores revealed that 54.2 % of the participants suffered from abnormal levels of psychological distress, while 37.3% and 32.2% suffered of moderate to extremely severe symptoms of anxiety and depression, respectively. The QUIP-RS score indicated the presence of compulsive buying (52.5%), compulsive medication use (62.7%), hypersexuality (67.8%), hobbyism-punding (84.7%) and compulsive eating (86.4%) in the sample. These behaviors were significantly associated with the DASS-21 scores ( $p < .01$ ). Results will be discussed considering the recent evidence about the impulsivity-negative affect interaction.

## THE TIME DIMENSION IN CANCER PATIENTS POST TRAUMATIC-GROWTH

*Chiara Fioretti (Dipartimento di Scienze Umane, Filosofiche e della Formazione, Università degli Studi di Salerno), David Faggi (Società Italiana di Psico-Oncologia), Viola Vinciarelli (SODS di Psico-oncologia, USL Toscana Centro), Lucia Caligiani (SODS di Psico-oncologia, USL Toscana Centro)*

The present study aims to explore the experience of growth related to being a cancer patient, by implementing a thematic analysis. 69 cancer patients narrated their growth experience related to cancer disease. Collected narratives were analyzed running a deductive thematic analysis, starting from the five domains of the Post Traumatic Growth Inventory (PTGI). Descriptive statistics and correlational analysis has been then performed. The five factors of the PTGI have been identified in narratives. The thematic analysis performed defined a further theme labeled by researchers "Time Dimension", which saturated 37.7% of the whole sample. Researchers discussed the presence of four sub-themes related to "time dimension" that described all coded narratives: "tracing a new temporal rhythm", "the value of deserved time", "facing the caducity of life" and "a view on the future". This emergent theme does not correlate in our results with other domains of personal growth in cancer previously described in scientific literature and seems to emerged as an independent variable not significantly associated with other domains of Post-traumatic Growth. Results suggest the need to further investigate the role of time dimension in the practical and emotional experience of growth in cancer.

## THE MEDIATING ROLE OF NEUROTICISM IN THE RELATIONSHIP BETWEEN PERCEIVED STRESS AND DEPRESSION IN GYNECOLOGICAL CANCER PATIENTS CHARACTERIZED BY THE SHORT VARIANTS OF THE 5-HTTLPR GENOTYPE: A PRELIMINARY STUDY

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The study explored associations between personality traits and serotonin transporter (5-HTTLPR) polymorphisms and their effects on the relationship between perceived stress and symptoms of depression in gynecological cancer patients. The sample was composed by 41 gynecological cancer patients who completed a self-reported questionnaire including the NEO-FFI, the dimension of depression-dejection of POMS, and the PSS. A polymerase chain reaction was also employed to identify genotypes in the serotonin (5HTT) polymorphism. One-way ANOVA test across the 5-HTTLPR genotype groups showed a significant effect of the short variants on neuroticism, a significant effect of the long variant on agreeableness, and a tendency to a statistical significance of the l/l variant on consciousness. Positive correlations of neuroticism with depressive mood and perceived stress were found in the combined group with short allele carriers. Patients characterized with higher levels of perceived stress related to cancer diagnosis and treatment and identified with the short variant of the 5-HTTLPR linked to higher levels on neuroticism seemed to be more susceptibility to experience high levels of depressive symptoms.

# PSYCHODYNAMIC, CLINICAL, AND PSYCHOSOCIAL DOMAINS OF PROBLEMATIC ONLINE BEHAVIORS: TOWARDS AN INTEGRATED FRAMEWORK

*Proponente: Valentina Boursier (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Recently, the growth of Internet-related activities in the general population has been paralleled by increasing interest in examining dysfunctional and/or psychopathological online behaviors. On the one hand, an international consensus exists about the need of carefully assessing the various problematic behaviors in the Internet; on the other hand, there is the risk of pathologizing common behaviors, by confusing the quantity of use with the quality of use of Internet applications. Therefore, despite the great number of definitions and measures for problematic Internet-related patterns, it is imperative to better define pathological Internet uses and carefully investigate the psychodynamic, clinical and psychosocial mechanisms underlying the development of specific problematic online behaviors. Research findings claim for an integrated framework and an updated understanding of the multifaceted phenomena concerning problematic online behaviors. This topic will be discussed in five presentations, based on recent research on several online behaviors from different contexts: Casale et al. (University of Florence), Santoro & Russo (University of Enna and Catania), Manari et al. (University of Parma), Venuleo et al. (University of Salento), Gioia & Boursier (University of Naples).

## POSITIVE AND NEGATIVE CREATIVITY WITHIN PROBLEMATIC ONLINE GAMING: THE MEDIATING ROLE OF MOTIVATIONS FOR PLAYING

*Valentina Boursier (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II),  
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Videogames are a common and widespread digital activity, that may solicit individuals' creativity, as well as negative outcomes. In particular, the relationship between problematic gaming and dysfunctional psychological mechanisms or psychopathology has been increasingly acknowledged. Similarly, it has been addressed the role that motivations may have in helping to differentiate between a healthy engagement or an unhealthy loss of control in online gaming. The aim of the current study was to specifically question the predictive role of positive and negative creativity on problematic online gaming (POG) testing the mediating effect of motivation for playing. We involved 454 participants (71.8% males; mean age=25.6) and we tested two mediation models in which motivations for playing mediated the relationships between positive creativity and POG, and between negative creativity and POG. Positive creativity did not directly predict POG, whereas specific motivations for playing mediated the relationship ( $R^2=.34$ ;  $p<.001$ ). On the contrary, negative creativity directly and indirectly predicted POG via motivations for playing ( $R^2=.36$ ;  $p<.001$ ). These findings contribute to the debate on a creative or risky engagement in online gaming, underlining the role of specific motivations for gaming

## INVESTIGATING DIFFERENT PATHWAYS TOWARDS SOCIAL AND PROCESS PROBLEMATIC SMARTPHONE USE WITHIN A METACOGNITIVE FRAMEWORK

*Silvia Casale (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Marcantonio M. Spada (London South Bank University, UK), Giulia Fioravanti (Dipartimento di Scienze della Salute, Università degli Studi di Firenze)*

This study introduces a new construct potentially associated with problematic smartphone use (PSU), i.e. the fear of not being up to date (FoBU), and tests two serial mediation models, in which it was hypothesised that: (i) metacognitions and social smartphone use would be serial mediators of the relationship between the fear of missing out (FoMO) and PSU; and (ii) metacognitions and process smartphone use would be serial mediators of the relationship between FoBU and PSU. 364 participants (F = 72.8%; Mage = 36.80 ± 15.32 years) were administered self-report measures assessing FOMO, FoBU, metacognitions about smartphone use, process and social smartphone use, and PSU. The multiple/serial mediation effect of metacognitions about smartphone use and process use on the relationship between FoBU and PSU was significant (indirect effect = 0.004; 95% CI: [0.0006, 0.009]). Conversely, the multiple/serial mediation effect of metacognitions about smartphone use and social use on the relationship between FOMO and PSU was not significant (indirect effect = 0.002; 95% CI: [-0.003, 0.009]). Smartphone social use did not predict PSU. This study highlights a pathway towards process smartphone use via a new phenomenon termed “fear of not being up to date” within a metacognitive framework

## PROBLEMATIC SOCIAL NETWORKING SITES USE IN THE ELDERLY: THE ROLE OF ATTACHMENT AND MOTIVES FOR USE

*Tommaso Manari (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma)*

People over 60 years old represent a large and growing population in Italy; yet, little research exists on their patterns of use, and motivations to use, social networking sites (SNSs). The present study explored problematic and non-problematic uses of different SNSs among Italian elders. Furthermore, we examined the relationships between insecure attachment, problematic social networking sites use (PSNSU), and motives (coping, conformity, enhancement, social) to use SNSs. The data have been collected through an online survey and the preliminary analyses were conducted on a sample of 4992 individuals of 60 years or older (57.9% females,  $M_{age} = 66.99$ ,  $SD_{age} = 6.98$ ). Attachment anxiety was directly associated with PSNSU, and this relationship was partially mediated by the four motives to use SNS. Attachment avoidance was indirectly associated with PSNSU via three motives (coping, enhancement, social). These findings show specific age-related pathways from attachment insecurity to PSNSU, which might inform prevention and clinical interventions on PSNSU.



## INTERPERSONAL GUILT IN VIRTUAL ENVIRONMENTS: THE ROLE OF EMOTION DYSREGULATION

*Gianluca Santoro (Facoltà di Scienze dell'Uomo e della Società, Università degli Studi di Enna 'Kore'),  
Angela Russo (Dipartimento di Scienze della Formazione, Università di Catania)*

There is evidence that interpersonal guilt might foster emotion dysregulation (ED), which has been associated in turn with problematic online behaviors. This study examined the mediating role of ED in the relationship between interpersonal guilt and problematic online behaviors. A sample of 434 community adults (224 females, 51.6%) aged between 18 and 69 years old ( $M=32.84$ ;  $SD=12.01$ ) completed self-report measures assessing interpersonal guilt, ED, problematic gaming, problematic social media use, and problematic online pornography use. Regression analyses were performed to identify predictors of problematic online behaviors. The mediating role of ED was tested through mediation analyses, including socio-demographic variables as covariates. Findings showed that interpersonal guilt predicted all the three types of problematic online behaviors, with ED partially mediating their relationships. Problematic online behaviors might constitute an emotion regulation strategy to cope with feelings of guilt. Thus, interventions aimed to improve emotion regulation abilities and recognize unconscious feelings of guilt might reduce problematic online behaviors.

## PROBLEM GAMING, PROBLEM GAMBLING AND POOR WELL-BEING AMONG ADOLESCENTS: EXAMINING THE ROLE OF THE INTERPERSONAL AND CULTURAL CONTEXT

*Claudia Venuleo (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento), Tiziana Marinaci (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento), Lucrezia Ferrante (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento)*

With the recent emergence of game-based gambling practices such as loot boxes and social network casinos, and the increased access to gambling activities online, problematic video game use emerged as a public health concern. Structural similarities between gaming and gambling are long-standing recognized. However, few studies have explored (dis)similarities in the psychosocial risk factors related to the interpersonal and social sphere, and the relationship between gambling and gaming and general well-being. Framed within a psychosocial and cultural standpoint, this study explored the role of the qualities of relational networks, family and peer approval and view of the social environment in predicting problem gambling, problem gaming and poor well-being among adolescents. A survey including the target variables was completed by 595 students aged 14-18 years (female: 68,7%). A multivariate multiple regression analysis was performed to examine the role of the selected psychosocial predictors on the three outcomes considered. Findings highlighted a common core underpinning problem gaming, problem gambling, and poor well-being – a low parental monitoring and an anomic view of the social environment – but also specificities in their psychosocial paths.

# PSYCHOLOGICAL FLEXIBILITY AND ACCEPTANCE AS KEY TARGETS FOR THE PROMOTION OF HEALTH

*Proponente: Emanuele Maria Giusti (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore - IRCCS Istituto Auxologico Italiano)*

Psychological flexibility, i.e. the ability to be in contact with the present moment as it is and to mobilize behaviors in the service of chosen values, and the processes that constitute it, such as acceptance, have become established as key concepts for the understanding and promotion of physical and mental health. However, their ramifications in different contexts are yet to be explored. This symposium aims to bring out their potential and applications in preventing or adapting to chronic conditions, promoting healthy behaviors and protecting against the impact of unfavourable circumstances. A first contribution will focus on the mediating role of the acceptance of pain, together with fear of movement and catastrophizing, in the relationship between pain and physical functioning in women with fibromyalgia and obesity. A second contribution will focus on the protective role of psychological flexibility against the impact of the pandemic on the participants' mental health. A third contribution will focus on the effects of the subcomponents of psychological flexibility on the processes and outcomes of obesity rehabilitation. A final contribution will present the evaluation of a treatment focusing on psychological flexibility to prevent the development of chronic postsurgical pain.

## TREATING PATIENTS WITH OBESITY: THE PSYCHOLOGICAL FLEXIBILITY MODEL. PRELIMINARY FINDINGS FROM THE ACTYOURCHANGE STUDY

*Roberto Cattivelli (Dipartimento di Psicologia, Università di Bologna), Silvana Grandi (Dipartimento di Psicologia, Università di Bologna), Anna Guerrini Usubini (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Defined as an excess of body weight, obesity is a significant risk factor for a plethora of physical, psychological, and social problems, all of which can heavily impact health, quality of life, and global functioning. Obesity is frequently associated with many physical comorbidities, including type II diabetes mellitus, cardiovascular disease, hypertension, kidney failure, and osteoarthritis and psychological problems such as depression, feelings of shame, low self-esteem, and stigma and eating disorders, as well as social and economic impairment. As treatment of choice in promoting psychological flexibility, Acceptance and Commitment Therapy [ACT] was found to be effective in several conditions, and among different populations, including weight management in individuals with obesity. However, the mechanism of action of psychological flexibility is less known. The aim of the present study is, within the context of a brief ACT intervention for behavioral change and behavioral maintenance of a healthy lifestyle in a sample of inpatients with obesity, to explore the effect of each subcomponent of the psychological flexibility model on treatment processes and outcomes.

## PRELIMINARY EVALUATION OF AN ACCEPTANCE AND COMMITMENT-BASED TREATMENT FOR THE PREVENTION OF CHRONIC POSTSURGICAL PAIN: THE NOPAIN STUDY

*Emanuele Maria Giusti (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore - IRCCS Istituto Auxologico Italiano), Marco Stramba-Badiale (IRCCS Istituto Auxologico Italiano Milano - Unità Operativa di Medicina Riabilitativa Milano), Enrico Molinari (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore - IRCCS Istituto Auxologico Italiano)*

The prevention of chronic postsurgical pain is important but still elusive. Addressing the psychological factors that are known to predict its incidence and intensity might be an effective way to achieve this goal. This contribution focuses on the feasibility, acceptability and the preliminary outcomes of the NOPAIN treatment, which is an ACT-based treatment specifically aimed to prevent the onset of chronic postsurgical pain which includes both a face-to-face group component implemented during the patients stay in the rehabilitation ward and an internet-based component that is administered after discharge. 80 patients were recruited from a rehabilitation ward after having undergone total knee arthroplasty and performed a baseline assessment of potential physiological, cognitive and psychological predictors of pain. Pain intensity and psychological outcomes were also assessed at discharge and after three months. The acceptability of the treatment was assessed after the face-to-face group component using semi-structured interviews. The results show that the NOPAIN treatment is feasible and acceptable and contributes to the prevention of chronic post-surgical pain. The results of this preliminary study will be the basis for the improvement of the intervention.

## THE TRAJECTORIES OF ANXIETY AND DEPRESSION DURING THE COVID-19 PANDEMIC AND THE PROTECTIVE ROLE OF PSYCHOLOGICAL FLEXIBILITY: A FOUR-WAVE LONGITUDINAL STUDY

*Giulia Landi (Dipartimento di Psicologia, Università di Bologna), Eliana Tossani (Dipartimento di Psicologia, Università di Bologna)*

Psychological flexibility has been shown to mitigate the adverse mental health impacts of the COVID-19 pandemic. However, no study has examined the longitudinal protective role of psychological flexibility over multiple COVID-19 peaks and corresponding lockdowns. This study explored the trajectories of anxiety and depression over two consecutive lockdowns during the first nine months of the pandemic in Italy (April 2020–January 2021) and examined whether they varied as a function of different psychological flexibility and inflexibility profiles. A total of 569 participants completed online surveys at four assessment points. The trajectories of anxiety and depression were examined with latent growth modeling. Results indicated that anxiety increased linearly throughout the study period, whereas depression displayed a quadratic trajectory evidencing a decrease with the easing of the first lockdown followed by an increase during the second lockdown. In addition, compared to the psychologically inflexible profile, the psychologically flexible profile reported significantly lower anxiety and depression which remained lower across the study period. Findings provide robust support for the use of ACT-based interventions to promote psychological flexibility during the COVID-19 pandemic.

## CATASTROPHIZING, FEAR OF MOVEMENT AND PAIN ACCEPTANCE IN FIBROMYALGIA

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Individuals with fibromyalgia (FM) and obesity experience significant impairment in physical functioning. Pain catastrophizing (PC), kinesiophobia, and pain acceptance (PA) have been identified as important factors that affect physical functioning. The objective of this study was to evaluate the role of PC, kinesiophobia, and PA as mediators of the association between pain severity and physical functioning in people with FM and obesity. In this cross-sectional study, 165 women with FM and obesity completed self-reported questionnaires on pain severity, PC, kinesiophobia, PA, and both perceived and performance-based physical functioning. Two multiple mediation analyses were performed. PA and kinesiophobia fully mediated the relationship between pain severity and self-reported physical functioning. PC and kinesiophobia fully mediated the relationship between pain severity and performance-based functioning. Factors like PA, kinesiophobia, and PC should be addressed in rehabilitative intervention. Interestingly, the subjective and objective aspects of physical functioning are influenced by different factors. Therefore, interventions for women with FM and obesity should focus on factors related to both subjective and performance-based physical functioning.

# TREATING DIFFERENT PSYCHOPATHOLOGICAL CONDITIONS IN ADOLESCENCE: FROM A SYMPTOM-CENTERED TO A PERSON-BASED DIAGNOSTIC APPROACH

*Proponente: Annalisa Tanzilli (Sapienza Università di Roma)*

Research supports the need to promote a person-based diagnostic approach, especially in adolescent patients presenting with several clinical conditions. A careful and comprehensive assessment of young patients can clarify the meaning and function of various psychopathological patterns or symptom configuration, as well as provide a road map for individualized interventions. This panel consists of four studies that shed light on some of the critical issues in the field. The first contribution by Innocenzi, Lo Buglio, Pontillo, Vicari, and Solmi, analyzes a network structure with UHR symptom domains, depressive and anxiety symptoms, and general psychological functioning. The second contribution by Williams and Moselli explores the relationship between pathological narcissism and suicidal motivations, showing the impact of grandiosity on the potential lethality of the suicide attempt. The third contribution of Tanzilli, Fiorentino and Gualco investigate distinct personality patterns, mentalized affectivity, and countertransference reactions related to depressive disorders in adolescence. The fourth contribution of Di Giuseppe and Conversano describes defensive and personality functioning in an adolescent with anorexia nervosa and treated with long-term dynamic psychotherapy.



## A NETWORK ANALYSIS OF ANXIETY, DEPRESSIVE, PSYCHOTIC SYMPTOMS AND FUNCTIONING IN YOUTH AT ULTRA-HIGH RISK FOR PSYCHOSIS

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The Ultra-high risk (UHR) for psychosis clinical population is characterized by the high prevalence of anxiety and depressive disorders. The goal of this study was to build and analyze a network structure with UHR symptom domains (i.e., positive, negative, disorganization and general symptoms), depressive and anxiety symptoms, and general functioning. Network analysis was applied to 157 UHR children and adolescents, assessed with the Structured Interview for Prodromal Syndromes (SIPS), Child Depression Inventory (CDI), Childrens-Global Assessment Scale (C-GAS), and Multidimensional Anxiety Scale for Children (MASC). In the network, negative and disorganization symptoms showed the strongest association, and depressive and anxiety symptoms were bridged by an edge. Positive symptom cluster did not exhibit any interplay with other nodes of the network. Despite current preventive interventions focus mainly on positive symptoms, they did not exhibit any association with other variables in the network. Our results suggest that assessing and targeting the relationship between negative and disorganization symptoms, as well as the interplay between depressive and anxiety symptoms is warranted in early intervention plans.

## CHANGES IN DEPRESSIVE DEFENSES IN ANOREXIA NERVOSA TREATED WITH DYNAMIC PSYCHOTHERAPY

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Eating disorders (ED) are frequent in adolescence and often associated with depression and other physical and mental disorders. Anorexia Nervosa (AN) is a challenging ED because it is perceived as an ego-syntonic syndrome that somehow protect the patient from a number of developmental tasks. The present study analyzed changes in defensive and personality functioning and AN severity in a 16-years old girl treated with long-term dynamic psychotherapy. Defense mechanisms were assessed using the Defense Mechanisms Rating Scales Q-sort (DMRS-Q) every six months for three years and at follow up. Personality functioning and Body Mass Index (BMI) were also monitored with the same cadency. Defensive and personality functioning gradually improved during the therapeutic process, while a healthy BMI was reached only after a 6-months residential treatment. Depressive defenses were associated with AN severity and low personality functioning. Improvement in defensive functioning predicted healthy BMI at follow up. Long-term dynamic psychotherapy might help in fostering self-awareness of psychological distress and in enhancing mature defensive strategies to manage it. However, an integrated dynamic-behavioral approach in treating severe AN is essential for the complete ED symptoms remission.

## THERAPIST RESPONSES, PATIENT EMERGING PERSONALITY PATTERNS AND MENTALIZED AFFECTIVITY IN THE PSYCHOTHERAPY OF ADOLESCENTS WITH DEPRESSIVE DISORDERS

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The assessment of depressive disorders is challenging in adolescence. This study explored the relationship between patients' personality patterns, mentalized affectivity, and the therapists' responses in the treatment of this clinical population. One hundred clinicians completed the Psychodiagnostic Chart-Adolescent of the PDM-2 and the Therapist Response Questionnaire for Adolescents. Adolescent patients filled in the Mentalized Affectivity Scale. Four emerging personality profiles were identified: depressive/introjective, anxious-avoidant, emotionally dysregulated and narcissistic. Adolescents presenting with emotionally dysregulated, and narcissistic personality patterns show greater impairment in the mentalized affectivity and tend to evoke in the therapist negative emotional reactions. Patients with depressive/introjective pattern show better capacities in the mentalized affectivity domain and elicit less negative countertransference reactions. The study extends knowledge on the personality patterns, mentalized affectivity and countertransference reactions related to depressive disorders in adolescents. Therapists should use the information derived from an accurate psychodynamic assessment to promote tailored treatments.

## THE ROAD FROM PERSONALITY PATHOLOGY TO SUICIDALITY IN ADOLESCENCE: THE ROLE OF SUICIDAL MOTIVATIONS

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Emerging patterns of personality pathology in adolescence have showed an important predictive role for suicidality in adolescence. It has also been indicated how specific motivations are responsible for advancing the suicidal process from ideation to actual attempts. In this paper two objectives of investigations are proposed: a) to evaluate the impact of personality pathology emerging patterns as assessed at both categorical and dimensional level on the different stages of the suicidal process; b) to evaluate the specific associations between personality emerging patterns and single motivational areas of the Motivational Interview for Suicide. Methods: a sample of 120 boys and girls aged 13 to 18 were administered the CSSRS and retested with a 9 months follow-up. At T1 the SCD II and MIs were also administered. Correlations and logistic regressions were carried out. Results: Personality pathology and BPD, at both a dimensional and categorical level, are a significant predictors of suicide attempts. Specific significant associations have been evidenced between BPD and NPD and the motivational areas of interpersonal influence. Discussion: The clinical implications of the impact of personality pathology for the building of relational motivations for suicide are considered.

## EMOTIONAL AND SOMATOFORM DISREGULATION IN ADOLESCENTS WITH PRODROMAL SYMPTOMS OF SCHIZOPHRENIA

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Emotion and somatoform dysregulation have been related to psychotic disorders and prodromal symptoms of psychosis. This research aimed to investigate the relation between emotional dysregulation and prodromal symptoms of schizophrenia in a group of adolescents with and without prodromal symptoms of psychosis admitted to a youth mental health service (N=50, male=26 (52%), mean age=16.38, sd=1.31). Participants were assessed for: prodromal symptoms of schizophrenia, emotion and somatic dysregulation, negative affectivity, and general psychiatric symptoms. Compared to the non-prodromal group, the prodromal group showed higher emotion ( $t=-2.714$ ;  $p=0.009$ ) and somatic dysregulation ( $t=-2.472$ ;  $p=0.018$ ), negative affectivity ( $t=-2.352$ ;  $p=0.023$ ), and general symptoms of psychopathology ( $t=-2.708$ ;  $p=0.009$ ). Furthermore, we found correlations between prodromal symptoms of psychosis, emotion ( $r=0.39$ ;  $p=0.005$ ) and somatoform dysregulation ( $r=0.47$ ;  $p=0.001$ ), negative affectivity ( $r=0.38$ ;  $p=0.006$ ), and general psychiatric symptoms ( $r=0.46$ ;  $p<0.001$ ). This study found an association between emotion and somatoform dysregulation and prodromal symptoms of psychosis. The findings suggest the importance of identifying emotion and somatoform dysregulation during the assessment of psychotic symptoms.

# UPGRADING THE RORSCHACH: RESEARCH AND ADVANCES - 5TH EDITION

*Proponente: Luciano Giromini (Università degli Studi di Torino)*

This symposium aims to provide a fifth update (the first was held in Rome in 2016, at the XVIII AIP conference) on the current state of Rorschach research in Italy. Camelio et al. start off this session by presenting the results of a transcranial random noise stimulation (tRNS) study investigating the role of the prefrontal cortex in the production of Rorschach color responses. Di Girolamo et al. then present the results of a series of survey studies designed to help professionals decide whether or not a set of commonly seen Rorschach percepts should be considered “prototypically” associated with a target determinant (e.g., color, shading, etc.). Next, Parlato et al. continue the symposium by reporting on the relationship between Rorschach and WAIS-IV scores in a relatively large sample of Italian outpatients seeking therapeutic treatment. Finally, Aschieri et al. present the results of an empirical study aimed at assessing the extent to which normative expectations and associated reference values for the Rorschach and the Personality Assessment Inventory (PAI) may need to be adjusted at this time due to the ongoing pandemic.

## EFFECTS OF COVID-19 EMERGENCY AND RELATED LOCKDOWN POLICIES ON THE NORMATIVE EXPECTATIONS FOR THE RORSCHACH AND PERSONALITY ASSESSMENT INVENTORY (PAI)

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The literature on the effects of COVID-19 and related lockdown measures on psychological functioning in the general population underscores higher levels of somatic body-related concerns, anxiety, depression, hypervigilance, and post-traumatic symptoms. Accordingly, a crucial empirical question is whether the normative reference values of currently standardized psychological assessment measures should now be updated to avoid over-pathologizing test takers. To address this research need, we administered the Rorschach test and the Personality Assessment Inventory (PAI) to 60 nonclinical volunteers and conducted a series of one-sample t tests to assess potential differences from the normative samples of the two tests, which had been collected before the pandemic outbreak. The results of the self-report testing highlighted larger and more frequent changes than performance testing. This is interpreted in the context of the nature of the two tests and stresses the importance of the Rorschach in the post-pandemic era.

## STUDYING THE RELATIONSHIP BETWEEN COLOR RESPONSES AND AFFECTIVITY IN RORSCHACH COMPREHENSIVE SYSTEM USING TRANSCRANIAL RANDOM NOISE STIMULATION

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Rorschach Comprehensive System (CS) is considered one of the eligible performance-based instruments in the assessment of mental functioning. Indices relating to color responses on the Rorschach CS are valid measures of affective processing but have not been studied in relation to brain regions known to regulate emotion. To validate the assessment of affectivity through Rorschach indices, a sample of 46 young adults was administered the Rorschach CS (both in standard color and black and white form) with and without transcranial random noise stimulation (tRNS) targeted at the prefrontal cortex (PFC). Stimulated subjects reported an increase in color responses compared to those without stimulation (Number of color responses:  $F=25.26$ ,  $p=.000$ ,  $\eta^2=.643$ ; Number of CF:  $F=14.97$ ,  $p=.000$ ,  $\eta^2=.517$ ; WSumC:  $F=23.26$ ,  $p=.000$ ,  $\eta^2=.625$ ). Our results highlight the relationship between color responses and affectivity and the role that PFC plays in emotion regulation. These findings support the use of the color-related variables included in the Rorschach CS as a valid measure of assessment of affectivity.



## THE ROLE OF COLOR DIAGNOSTICITY AND PROTOTYPICALITY IN THE RORSCHACH TASK

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In the clarification phase of the Rorschach administration, the assessor must pay attention to the extent to which the delivered response presents “prototypical imagery,” i.e., the “real-world attributes of an object and the core characteristics of the object as it typically exists in the external environment or as it is conventionally represented. (Meyer et al., 2011, p.163). When a response presents prototypical imagery suggesting (without confirming) the presence of a determinant (e.g., color), the assessor must ask a question to clarify whether it would be appropriate to code that particular determinant. Thus, to help professionals decide whether a set of commonly seen percepts should be considered “prototypical” in relation to a target determinant (i.e., color), we conducted a survey on several hundred volunteers. First, we identified a set of objects that are often seen in the inkblot cards. Then, we asked our participants to (a) indicate 5 to 30 characteristics for each of these objects, (b) name 3 to 5 things that are strongly associated with a target color, and (c) write the most appropriate color for each of the selected objects. The results shed light on the role of color diagnosticity and prototypicality in the administration of the Rorschach.

## THE RELATIONSHIP BETWEEN MAXIMUM AND TYPICAL PERFORMANCE: A STUDY WITH THE RORSCHACH AND WAIS-IV

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To assess maximum performance, one of the most commonly used tests is the fourth edition of the Wechsler Adult Intelligence Scale (WAIS-IV); to assess typical performance, one of the most commonly used tests is the Rorschach. Although some studies have already examined the relationship between WAIS-IV and Rorschach scores, all have a number of important limitations, such as the use of small samples or outdated versions of the tests (e.g., the WAIS-R) or conceptualizations of intelligence. To overcome these limitations, the current study tested the correlation of Rorschach variables measuring cognitive complexity with WAIS-IV scores considered on the basis of the Cattell–Horn–Carroll (CHC) model of intelligence. Two hundred Italian outpatients undergoing therapeutic treatment were tested with both the Rorschach test and the WAIS-IV, and our statistical analyses examined the correlations of the relevant variable scores. The results showed that complexity on the Rorschach correlated positively with the comprehension / knowledge (Gc), short-term memory (Gsm), and processing speed (Gs) skills measured with the WAIS-IV. These results underscore the importance of a multimethod approach to understanding the patients psychological functioning, especially in the case of gifted patients.

# EMOTIONAL INTELLIGENCE IN CONTEXTS: EVIDENCE FROM CLINICAL AND EDUCATIONAL SETTINGS

*Proponente: Federica Andrei (Università di Bologna)*

Emotional intelligence (EI) is among the latest outcomes of the emotion-reason debate, an expression of the progressive emphasis of the psychological literature on the importance of emotion-related constructs in successful adaptation. After more than thirty years from Salovey and Mayer's first formal definition, there is evidence that a good EI predicts better physical and mental health, and plays an important role in school-related outcomes. However, the construct still represents a controversial topic for both scientists and clinicians, and current evidence is largely based upon university students. There is therefore a need of additional research in order to understand the specific applied contexts where EI exerts its direct and indirect influence. More studies are required to improve our knowledge on the actual role played by EI in real life settings, including schools, and with specific samples (e.g., clinical and school-aged children). Yet, can EI be improved? How? The present proposal seeks to collect contributions from clinical and educational settings in order to provide new data useful to open a debate upon these unresolved issues.

## EVALUATING TRAIT EMOTIONAL INTELLIGENCE IN PRIMARY SCHOOL CHILDREN: DOES IT PLAY A ROLE IN THE RELATIONSHIP BETWEEN SCHOOL ANXIETY AND ACADEMIC RESULTS?

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Trait emotional intelligence (TEI) is conceptualized as a lower order personality construct defined as a constellation of self-emotional perceptions and behavioral dispositions. Specifically, TEI could act as protective factor for the development of children scholastic competences as well as against the onset of high anxious symptoms which could negatively affect academic achievements. With a longitudinal design, the present study evaluates the changes in children's scholastic anxiety and results over time and the role of TEI on such changes. To this end, 150 children aged 8-11 years and their prevalent teachers were involved. The TEIQUESF and Anxiety Scale Questionnaire for Children were used in their both self-report and other-rated versions. Academic performance was measured through children's final school grades and school conduct. Preliminary results showed that there is a significant and negative relationship between scholastic anxiety and academic results ( $p < .01$ ) and TEI partially mediated this relationship. Data collection is still ongoing and more specific and longitudinal data will be presented and discussed.

## THE RELATIONSHIP BETWEEN TRAIT EI, BODY IMAGE CONCERNS, DISTRESS AND QUALITY OF LIFE IN WOMEN WITH PCOS

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PCOS is an endocrine disorder whose symptoms can affect body satisfaction, General Distress (GD), Quality of life (QoL). Trait Emotional Intelligence (TEI), affecting Body Image Concerns (BC) could decrease GD by improving QoL acting as a protective factor, for this reason the purpose of this study is verify association between TEI, BC, GD, QoL. 476 women, aged between 18 and 46 ( $M = 27.84$ ,  $DS = 5.10$ ), with PCOS filled a protocol with TEIQue, I-BICI, DASS-21, PCOS-QoL. SEM with latent variables was used to test a model with TEI as predictor, BC and GD as mediators, QoL as outcome. Acceptable fit indices was found:  $\chi^2(48) = 234.04$ ;  $p < .001$ , CFI = .95, RMSEA = .09 (90% CI = .08 – .10), SRMR=.04. Significant paths were found from TEI to BC ( $\beta = -.38$ ;  $p < .001$ ) and GD ( $\beta = -.62$ ;  $p < .001$ ), and from BC to GD ( $\beta = .29$ ;  $p < .001$ ) and QoL ( $\beta = -.49$ ;  $p < .001$ ), and from GD to QoL ( $\beta = -.31$ ;  $p < .001$ ). Indirect association was found from Trait EI to QoL by BC ( $\beta = .19$ ;  $p < .001$ ) and GD ( $\beta = .19$ ;  $p < .001$ ). This study may have clinical implications in planning interventions targeting the antecedents of BC and GD in order to improve the QoL.

## EFFECTS OF A PILOT TRAINING OF EMOTIONAL INTELLIGENCE SKILLS ON PREADOLESCENTS' PSYCHOLOGICAL ADJUSTMENT

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The effects of a brief training to promote Emotional Intelligence (EI) skills in primary school have been explored using a set of outcomes related to psychological adjustment: trait/ability EI, positive/negative affect, regulatory emotional self-efficacy, coping styles, and psychological well-being. Sixty-eight preadolescents ( $10.68 \pm .58$  years) were randomly assigned to either the experimental condition (EI training) or the active control condition (pro-environmental training). The experimental training relied on the most recent hierarchical three-factor models of EI skills, with activities directed to improve emotion perception, understanding, and management. Analyses performed on pre/post-training measures showed that emotional abilities measures significantly improved, whereas negative affect and distraction coping style measures significantly diminished in the EI training condition only. Although the EI training effects did not extend to the other relevant variables of functioning, it produced promising results, suggesting, on the one side, the efficacy of short school-based EI programs in promoting basic adaptive changes, and, on the other side, the importance of further investigating the training features required to extend its benefits also to psychological well-being.

## THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE, OBESITY AND EATING DISORDER IN CHILDREN AND ADOLESCENTS: A SYSTEMATIC MAPPING REVIEW

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Eating and weight disorders often develop early in life and cause a long-standing significant health burden. Given the documented role of emotional intelligence (EI) in shaping the body image and predicting the onset of eating disorders, knowledge of the mechanisms involved in EI among youth is fundamental to designing specific interventions for screening and prevention of obesity and eating disorders (EDs). The present systematic mapping review was aimed to explore and quantify the nature and distribution of existing research investigating the impact of EI on EDs in young people. A systematic search for relevant articles was conducted using PubMed, Scopus, PsycINFO and Web of Science databases. The Appraisal tool for Cross-Sectional Studies (AXIS) was used to assess the included studies' methodological quality. The included studies' results were mapped based on stratification by age groups (children, preadolescents, and adolescents), population (clinical vs. non-clinical) and disordered eating outcomes. Nine studies were included, supporting the association between EI and body image dissatisfaction, ED risk and bulimic symptomatology, but not with anorexic symptoms. Research on children and clinical populations was scant. Further studies are needed to deepen the role of EI in the genesis and maintenance of EDs.

# EXPLORING CARE RELATIONSHIPS: THE ROLE OF PERSONAL NARRATIVES AND EMOTIONAL RESPONSES

*Proponente: Chiara Fioretti (Università degli Studi di Salerno)*

Care relationships have been investigated by means of variables such as satisfaction, trust, compliance and personality traits related to relationship outcomes. Few studies used narratives and emotional responses to investigate relationships between health professionals and patients. Starting from the consideration that narrative is a relational act (Bruner, 2004) and that all relationships are strictly dependent on narrative among their members (Smorti, 2019), the proposed symposium aims to bring evidence to the use of narrative and emotional responses in exploring care relationships, comparing different methods of data collection and data analysis. Five groups of research will present their studies: two groups from Padua and Perugia will present three studies on analysis of care relationships in psychotherapy as a tool to investigate patients' trauma, emotional involvement in relation and countertransference experience. Firenze and Salerno will focus on the use of narratives as a tool to investigate care relationships in medicine and to promote education to communication and socio-emotional skills. The invited discussant will promote a discussion comparing and analyzing different methodological uses and roles of personal narratives in exploring relationships of care contexts.



## RE-AUTHORING TRAUMA THROUGH THE POLYPHONY OF THE SELF. CLINICAL AND PSYCHOSOCIAL REFLECTIONS ON THREE STORIES IN PSYCHOTHERAPY

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The role of narrative as a human activity through which people understand themselves and the world has been emphasized by several traditions, and narrative and cultural psychology emerge as pioneering (Bruner, 1990; Sarbin, 1986; White & Epston, 1990; Smorti, 2011). Several studies underline the importance of personal narratives in therapeutic processes with people who have experienced traumatic events (Demborough, 2006). This contribution aims to discuss the role of narratives in therapies of traumatic experience from a social constructionist (Gergen, 2009) and dialogical perspective (Konopka, Hermans & Goncalves, 2019), both contemplating the idea that the individual is inhabited by a multiplicity of voices or I-positions. Through the exemplification of three clinical situations (one related to the trauma of chronic illness, one to the trauma of refugees and one to the trauma of sexual trafficking) we will illustrate the importance of the multiplicity of the self that clients and therapists host to co-construct alternative narratives to the one related to the traumatic experience. Our contribution ends by emphasizing the relevance of relational approaches to trauma oriented towards the construction of polyphonic narratives (cf. Lannaman & McNamee, 2020).

## EXPLORING NARRATIVES TO INVESTIGATE DOCTOR-PATIENT RELATIONSHIP IN THE CARE PATH FOR GENETIC CARDIOMYOPATHIES

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Genetic Cardiomyopathies are chronic diseases involving physical and psycho-social issues which imply the need to involve the patient in care relationships with their doctors across all the life-span. For the present study, consultations of 45 adult patients affected by cardiomyopathies (15 at their first consultation, 15 at their 1-year follow up and 15 at 10-year follow-up) were audio-recorded, transcribed and coded considering differences in doctors' and patients' roles in terms of word-count, type of questions and answers performed. Results show that doctor narrative is prone to decrease from first consultation to both follow-ups ( $F(2,42)=4.631$ ;  $p=.01$ ), with a lower level of anamnestic dialogue in follow-ups ( $F(2,42)=4.055$ ,  $p=.02$ ). At the same time, patients increase in follow-ups the number of questions to doctors ( $F(2,42)=3.339$ ,  $p=.04$ ). The first consultation acquires the meaning of a diagnostic meeting in which doctors narrate and ask more, preferring an anamnestic script characterized by sequence of new questions. In this scenario, patients don't find the space to ask their doctors for explanations or clarifications. Follow-up visits, on the other hand, allow the patient the opportunity to narrate their illness experience, acquiring an active role in care relationship.

## CONFIGURATION AND CARE OF THE CHILD WITH CERTIFICATION: A STUDY OF THE NARRATIVES OF TEACHERS, PARENTS AND LOCAL SERVICES

*Antonio Iudici (Università degli Studi di Padova)*

In recent years, there has been an increase in the number of diagnoses and related certifications for school-age children. In addition to a refinement of assessment tools, the literature reveals a tendency to medicalize developmental paths. This process runs the risk of defining as problematic some normal subjective experiences lived by minors at school. Therefore, it becomes important to understand how the conditions are created that lead to this overdiagnosis, as defined by some authors. The objective of this research was to explore the narratives of teachers, parents and neuropsychiatric services regarding how they detect the need how they detect the need to deepen the diagnosis and how they use it in the school context. Results note how diversity sometimes arises based on how unresponsive children are to contextual expectations and that these difficulties are reconfigured as personal difficulties. Certifications are used to have specific aids with the intention of helping minors who fail to meet expected standards. However, the outcomes of these narratives also carry the risk of sedimenting differences and implementing activities of school exclusion or weak school integration activities.

## AN INTERDISCIPLINARY PHENOMENOLOGIC-HERMENEUTIC TRAINING TO HEALTH CARE RELATIONSHIPS FOR UNIVERSITY STUDENTS: QUALITATIVE INVESTIGATION OF THE EXPERIENCE OF THE PARTICIPANTS

*Rosapia Lauro Grotto (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Alessandra Amato (Associazione LAPO ONLUS, Firenze), Debora Tringali (LAPO ONLUS)*

In the present decade, a profound re-evaluation of the relational factors implied in caring patients and family members is taking place: there is growing evidence of the relevance of the relational skills of the professionals in determining the perceived quality of the interventions and outcomes. Nevertheless, the relational training is only occasionally and often informally achieved in most Medical Schools. Here we present an interdisciplinary model of relational training for university students based on the use of testimonies and on group discussion of live experiences from patients, family members and health care professionals. The laboratory took place in Florence University in 2019-2020: 96 students from the last 2 years of formal training in Medicine, Psychology, Nursing and Physiatry attended it on a voluntary basis. All participants completed a written feed-back essay and collected material underwent consensual content analysis and was therefore re-organized in phenomenological categories. Here we present and discuss results obtained from M.D. students, documenting the deep impact of testimonies and their value in providing an opportunity to develop a reflexive approach to relational experience, very often mentioned as the first ever encountered by the students.

## WHEN WORDS FAIL AND BODIES SPEAK: THERAPIST EMOTIONAL RESPONSES AND THERAPY RELATIONSHIP IN PATIENTS WITH EATING DISORDERS

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A growing body of evidence has shown that therapist emotional responses play a relevant role in psychotherapy process and outcome, and that patients with eating disorders (ED) may evoke strong negative emotions in treating clinicians, such as rage, hopelessness, or incompetence. This study aimed at investigating the predictive value of a broad spectrum of therapists' emotional responses in determining early therapeutic alliance and treatment outcome. A sample of 89 ED patients treated in a residential program were asked to complete the Working Alliance Inventory, the Eating Disorder Inventory-3, and the Outcome Questionnaire-45 at both intake and discharge. Clinicians completed the Therapist Response Questionnaire to evaluate their countertransference patterns. Findings showed that patients with anorexia nervosa evoked more feelings of being inadequate, incompetent, unappreciated, or devalued in their therapists, whereas patients with bulimia nervosa induced more disorganized, disengaged, and overinvolved emotional responses. Criticized/mistreated, helpless/inadequate and disorganized responses predicted worse early therapeutic alliance and therapy outcome. These results suggest the importance of countertransference patterns in treating this challenging clinical population.

## **MENTAL HEALTH PROMOTION IN YOUNG ADULTS: STUDIES PRESENTED BY E-CARE RESEARCHERS OF THE AIP, CLINICAL AND DYNAMIC PSYCHOLOGY SECTION**

*Proponente: Giulia Landi (Dipartimento di Psicologia, Università di Bologna)*

The present symposium provides an overview of the latest research on mental health in young adults conducted by researchers belonging to the early career researcher network (E-CARE) of the AIP, Clinical and Dynamic Psychology Section. In the first contribution, Mancinelli and some E-CARE group members conducted network analyses to investigate patterns of associations between psychopathological symptoms, emotion regulation, and problematic social networking sites use within two groups of young adults: those with probable maladaptive daydreaming (MDers) compared to non-MDers. In the second contribution, Schettino and colleagues combined ecological momentary assessment with ambulatory peripheral autonomic monitoring to analyze sign-tracking as a possible transdiagnostic trait linked to addiction related-behaviors in young adults. The last two contributions examined the impact of the COVID-19 pandemic on young adults. In particular, Landi examined the mental health impacts of family caregiving on young adult carers and investigated the mental health status of this neglected group of informal carers. Finally, Sardella and colleagues focused on gender differences among young adults in post-traumatic growth, future orientation, fear of COVID-19, and loneliness.

## YOUNG ADULT CARERS DURING THE PANDEMIC: THE IMPACTS OF PARENTAL ILLNESS AND OTHER ILL FAMILY MEMBERS ON MENTAL HEALTH

*Giulia Landi (Dipartimento di Psicologia, Università di Bologna)*

The mental health impacts of the COVID-19 pandemic on young adult carers have been neglected. This study aimed to identify COVID-19 related risk factors for young adult carers and examined their mental health compared to non-carer peers. Of the 1823 Italians aged 18–29 who completed an online survey, 1458 reported no ill family member (non-carers). Young adult carers included 268 with an ill parent, and 97 with an ill non-parent family member. Two mental health outcome categories were assessed: COVID-19-related (risky health behaviors, loneliness, home violence, fear of COVID-19) and general (anxiety, depression, wellbeing). Six COVID-19 related risk factors were significantly associated with poorer mental health in young adult carers. Compared to non-carers, young adult carers displayed poorer mental health across all outcomes. The hypothesis that young adult carers caring for an ill parent would report poorer mental health than those caring for ill non-parent family members was supported only for the COVID-19-related outcomes. The elevated rates of distress and pandemic-related mental health problems among young adult carers constitutes a serious public health issue and highlight this group as a priority for mental health promotion interventions.

## A NETWORK ANALYSIS APPROACH TO MALADAPTIVE DAYDREAMING AND PSYCHOPATHOLOGY IN YOUNG ADULTS

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This study examined the mutual association between maladaptive daydreaming (MD; interference with life and somatosensory retreat), psychopathological symptoms (depression, anxiety, somatization, obsessive-compulsive-OC, interpersonal sensitivity, psychoticism), emotion regulation (reappraisal and suppression), and problematic social networking sites use (PSNSU). Two network analyses were run on 297 young adults with probable MD (MDers) (Meanage = 23.2±2.7) vs. 234 non-MDers (Meanage = 23.4±2.6). Compared to non-MDers, MDers showed: a) significantly higher scores in all study variables, except for reappraisal; b) no connections between the cluster of psychopathological symptoms and any emotion regulation strategy; c) a connection between the cluster of psychopathological symptoms, particularly OC symptoms, and MD-interference with life; d) a connection between PSNSU and MD-related variables. The Network Comparison Test showed significantly different network structures ( $M = .24$ ;  $p = .01$ ). Findings support the idea of MD as a clinical phenomenon and the relevance of OC symptoms for MDers. In MDers, PSNSU might be used as a maladaptive emotion regulation strategy.



## POST-TRAUMATIC GROWTH, FUTURE ORIENTATION, FEAR OF COVID-19 AND LONELINESS DURING THE COVID-19 PANDEMIC: PECULIAR DIFFERENCES IN A SAMPLE OF COMMUNITY YOUNG ADULTS

*Alberto Sardella (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina), Vittorio Lenzo (Dipartimento di Scienze della Società e della Formazione d'Area Mediterranea, Università per Stranieri "Dante Alighieri" - Palliative home care services, Sisifo—Consortium of Social Cooperatives), Christian Franceschini (Dipartimento di Medicina e Chirurgia, Università di Parma)*

The purpose of the study was to evaluate peculiar psychological factors among young adults during the COVID-19 pandemic. Community young adults were recruited through an online survey. The Post-traumatic Growth Inventory (PTGI), the Multidimensional Assessment of COVID-19-Related Fears (MAC-RF), the Future Orientation Scale (FOS), and the UCLA Loneliness Scale were administered. The study included 373 participants (mean age 24.02 years). Females showed higher FOS and MAC-RF scores, and lower loneliness than men; females reported also higher levels of PTGI Relating to Others, Personal Strength, and Appreciation of Life than men. Subjects who lost their job during the pandemic reported lower scores of PTGI New Possibilities and PTGI Spiritual Change than who did not. Subjects who needed to change their job due to the pandemic reported lower levels of each PTGI domain. Subjects who referred at least an acquaintance or loved one being infected by COVID-19 reported lower PTGI Spiritual Change, and higher MAC-RF scores than who did not. In conclusion, females can exhibit higher psychological positive changes, facing a traumatic experience. Additionally, negative professional and personal contingencies could affect the individual sense of personal growth following the pandemic.

## THE PROPENSITY TO SIGN-TRACKING AS A RISK FACTOR FOR IMPULSE-RELATED DISORDERS: AN ECOLOGICAL MOMENTARY ASSESSMENT WITH AMBULATORY AUTONOMIC MONITORING IN YOUTH

*Martino Schettino (Dipartimento di Psicologia, Sapienza Università di Roma), Ilenia Ceccarelli (Dipartimento di Psicologia, Sapienza Università di Roma), Mika Tarvainen (Department of Clinical Physiology and Nuclear Medicine, Kuopio University Hospital, Finland), Marialuisa Martelli (Dipartimento di Psicologia, Sapienza Università di Roma), Cristina Orsini (Dipartimento di Psicologia, Sapienza Università di Roma), Cristina Ottaviani (Dipartimento di Psicologia, Sapienza Università di Roma)*

Especially during young adulthood, environmental stimuli may have control over behaviors. Preclinical studies suggest that sign-tracking (ST), the tendency to attribute motivational value to reward associated stimuli, may reflect a predisposition toward addiction behaviors. However, the translational validity of this model has hardly been supported. To fill this gap, we combined an ecological momentary assessment with ambulatory peripheral autonomic monitoring to test the hypothesis that traits associated with ST in preclinical studies would be associated with attribution of high incentive salience to reward-related cues. Several times for two days, 76 psychiatrically healthy young adults were asked to rate the attractiveness of several pre-selected ecological rewards (e.g., coffee) and the preceding cues (the smell of coffee), while their EKG was recorded. The results showed that individuals with high levels of impulsivity, obsessive-compulsive, and addiction tendencies rated as more attractive -and showed a greater increase in sympathetic arousal to- cues versus rewards. The opposite pattern emerged for those with low levels in the same dispositional traits. This study represents an attempt to early detect individuals who are vulnerable to develop impulse-related disorders.

## MENTALIZATION IN CLINICAL PRACTICE: RESEARCH AND CLINICAL INTERVENTIONS PERSPECTIVES

*Proponente: Antonello Colli (Dipartimento di Studi Umanistici, Università di Urbino)*

Mentalization is considered one of the most important factors in relation to psychopathology (personality disorders, eating disorders etc.) and to psychotherapy process and outcome. Most important mentalization is considered an aspecific factor that crosses different forms of psychotherapy. The contributions of this symposium represent different ways to address from an empirical research point of view some issues related to mentalization in clinical practice such as: the relationship between therapist's emotional responses, interventions and patient's mentalization (Ferrero et al.); the relationship between trauma and mentalization (Boldrini et al.); the effects of a group counseling intervention aimed at fostering patient's mentalization (Esposito et al.) and finally the effects of attachment system activation on mentalization abilities two different samples of patients with PD and without PD. These clinical issues are addressed using different research methodologies (single case design, process study based on session transcript, process outcome design).

## IN-SESSION ACTIVATION OF THE ATTACHMENT SYSTEM DECREASES REFLECTIVE FUNCTIONING IN PERSONALITY DISORDERS PATIENTS

*Antonello Colli (Dipartimento di Studi Umanistici, Università di Urbino), Giulia Gagliardini (Dipartimento di Studi Umanistici, Università di Urbino)*

Difficulties with attachment are often at the heart of most PDs. Similarly patients with PD often are characterized by problematics in mentalization. Psychotherapy can be considered a relational arena in which patient attachment system is particularly elicited. Several clinicians have supposed that mentalizing difficulties are state related and that the activation of attachment system could stress heavily patient mentalizing capacities. The aim of this work is to investigate the effects of in-session activation of the attachment system on mentalization, comparing patients with PD and without. Two groups of raters evaluated blinded 50 sessions of different patients (25 PD and 25) with the AIMIT (Assessment of Interpersonal motivation in transcripts) and with the RF (Reflective Functioning Scale). Results indicated that generally PD patients are characterized by lower level of RF than no PD patients but when attachment system is active this difference is more consistent. Results will be discussed in relation to limitations, clinical practice and future directions.

## MENTALIZING UNIVERSITY EXPERIENCE THROUGH GROUP COUNSELLING

*Giovanna Esposito (Università degli Studi di Napoli Federico II), Raffaella Passeggia (Università degli Studi di Napoli Federico II), Maria Francesca Freda (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Many interventions have been developed to promote mentalizing with high functioning individuals who rely on rigid mentalization when facing developmental tasks (Midgley & Vrouva, 2014). The Narrative Mediation Path (NMP; Freda et al., 2016) group counselling was developed to sustain underachieving university students' mentalizing through narration to foster psychological well-being, academic engagement, and performance. This contribution discusses the mentalizing roots of the NMP, its effectiveness, integrity to the MBT-G (Karterud, 2015), and the relationships between clinician's mentalizing interventions and members' change. The effectiveness of 9 face-to-face (N=56) and 13 online (N=66) NMPs was evaluated with a set of questionnaires, including the RFQ. Treatment integrity and members' change were analyzed in some of the face-to-face NMPs, respectively with the MBT-G AQS (Karterud, 2015), and the IMCS-G (Esposito et al., 2021). Outcome results showed an improvement of students' mentalizing; process results showed an adequate integrity and the facilitating role of specific clinician's mentalizing interventions (e.g., mentalizing external events in the group) in promoting members' change. Strengths and rooms of improvement of the NMP in fostering mentalizing will be discussed.

## PROCESS STUDY ON THE VARIATIONS OF MENTALIZATION DURING PSYCHOTHERAPY: THE ROLE OF THE THERAPIST'S TECHNIQUE AND THE EMOTIONAL RESPONSE

*Simona Fassina (Società Adleriana Italiana Gruppi e Analisi - Unità di Psicoterapia, Centro DPAA, ASL TO4), Barbara Simonelli (Unità di Psicoterapia, Società Adleriana Italiana Gruppi e Analisi), Andrea Ferrero (Section Theory and Research, International Association of Individual Psychology)*

Still few investigations systematically consider the relationship between mentalization and different components of the psychotherapeutic process. This study aimed to compare the relative relevance of the therapists technique and emotional response in determining changes in mentalization in 79 subjects with Personality Disorder afferent to a Mental Health Center in Turin. Using the Comparative Psychotherapy Process Scale, Therapist Response Questionnaire and Mentalization Imbalances Scale, patients were repeatedly assessed at 5 time points of a 40-session Sequential Brief-Adlerian Psychodynamic Psychotherapy cycle. The study adopted a cross-lagged panel model to determine which variable has the strongest causal influence on the other at different points in therapy. In relation to changes in mentalization, the results indicate the importance of using differentiated techniques according to the patients psychopathological functioning and the explicit relevance of the therapists emotional attitude.

## MENTALISING TRAUMA: CLINICAL REMARKS FROM A CASE STUDY

*Osmano Oasi (Università Cattolica del Sacro Cuore), Elisa Marraffini (Azienda Socio-Sanitaria Territoriale di Pavia), Annalisa Boldrini (Azienda Socio-Sanitaria Territoriale di Pavia), Francesca De Salve (Università Cattolica del Sacro Cuore), Roberto Colombo (Azienda Socio-Sanitaria Territoriale di Pavia), Vera Abbiati (Azienda Socio-Sanitaria Territoriale di Pavia), Paolo Ambrosi (Azienda Socio-Sanitaria Territoriale di Pavia), Edgardo Caverzasi (Società Psicoanalitica Italiana)*

Adverse emotional experiences lead to hyperactivation of the attachment system with important repercussions on interpersonal relationships. Particularly, trauma attacks normal epistemic trust, generating epistemic distrust and epistemic hypervigilance. In people affected by traumatic events there is a failure of mentalization and feelings of shame. Social relationships and contact with a mentalizing other (e.g., therapists) can promote the recovery of mentalization. The aim of this case study is to provide comprehensive framework and interpretative lines of complex trauma according to the MBT. To this end, a series of assessment sessions were conducted with a Ukrainian truck driver (45 years old) who presented to the Psychiatric Unit of Pavia (Lombardy) with PTSD symptoms. During the sessions, the traumatic event, and related affective experiences (such as shame), were explored and non-mentalizing modalities were managed. At the end of the assessment process the patient was able to speak about his traumatic experience, with a reduction in feelings of shame. Moreover, it was possible for him to call his family and to verify its members were safe. Finally, the reduction of emotional arousal enabled the patient to be discharged.

## THE INTERPLAY BETWEEN MALADAPTIVE PERSONALITY TRAITS AND MENTALIZATION IN ADOLESCENT GAMBLING

*Barbara Pizzini (Università degli Studi della Campania 'Luigi Vanvitelli'), Maria Ciccarelli (Università degli Studi della Campania 'Luigi Vanvitelli'), MARINA COSENZA (Università degli Studi della Campania 'Luigi Vanvitelli'), GIOVANNA NIGRO (Università degli Studi della Campania 'Luigi Vanvitelli'), MARIAGIULIA SACCO (Università degli Studi della Campania 'Luigi Vanvitelli')*

Prior research showed that specific maladaptive personality trait facets, as measured by mean of the Personality Inventory for DSM-5 (PID-5), contribute significantly to gambling severity in the adult population. However, no studies have so far analyzed the role of the PID-5 personality trait facets in adolescent gambling. This study first investigated the interplay between problematic gambling, maladaptive personality traits, and mentalization deficit among adolescents. Three hundred and sixty-five adolescents were administered the South Oaks Gambling Screen-Revised for Adolescence (SOG-RA), the 220-item Personality Inventory for DSM-5, and the Reflective Functioning Questionnaire (RFQ-8). Hierarchical linear regression analysis showed that male gender, older age, hypomentalization, Perceptual dysregulation, Deceitfulness, and Attention seeking predicted gambling severity ( $R^2_{adj}=.24$ ;  $F_{6,364}=19.86$ ;  $p<.001$ ). The mediation analysis revealed that the effect of hypomentalization on gambling severity was mediated by Perceptual dysregulation and Deceitfulness. Results indicated that poor mentalizing, exacerbating the tendency to disconnect from reality and to behave dishonestly, represents a vulnerability factor for adolescent problematic gambling.



# NEW TRAJECTORIES OF CLINICAL PSYCHOSEXOLOGY: SEXUAL BEHAVIORS AND ATTITUDES IN THE CONTEMPORARY WORLD

*Proponente: Lilybeth Fontanesi (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Clinical psycho-sexology is an ever-evolving multidisciplinary field. Ongoing socio-cultural revolutions and the progressive collapse of taboos are changing the way we approach sexuality, facing new phenomena and nuances of sexual behavior, which may involve risks for well-being and mental health. For this symposium, 5 topics were chosen to illustrate recent and novel findings in this field. Dr. Nimbi will provide the results of the most recent research concerning sexual fantasies, sexual communication trainings, and the clinical applications useful both in treatment. Prof. Prunas will describe the role of body image self-consciousness in the relationship between narcissistic personality and sexual dysfunction in a sample of women. Dr. Limoncin will examine the role of ageism and self-perceived/socially perceived dysfunctional beliefs in a group of elderly homosexual and heterosexual men and women. Prof. Ciocca will discuss the relationship between dysfunctional personality traits and the capacity to love and how it can influence the sexual problematic behavior. Finally, Dr. Fontanesi will provide a description of the Incel phenomenon, discussing the research about the development of “Incel traits”, which include an exploding mix of paranoia, sexism, depression, and anxiety.

## CAPACITY TO LOVE AND PROBLEMATIC SEXUALITY: THE ROLE OF ATTACHMENT STYLES AND PSYCHOPATHOLOGICAL DISTRESS

*Giacomo Ciocca (Sapienza Università di Roma), Giulia Origlia (Sapienza Università di Roma)*

Sigmund Freud has firstly theorized the physiological psychic functioning is represented by the object investment. The capacity to love is an integrant part of psychic functioning and it is strictly related to the personality development according to a mature capacity to bind to the other significant person, such as the experience to fall in love (Kernberg, 2011). The aim of this study is to investigate the relationship between capacity to love and hypersexual behavior also controlling the role of attachment styles and psychological symptomatology. Through an online platform, a convenience sample of 521 people was recruited. Subjects have compiled a sociodemographic chart and four psychometric tests to assess the capacity of love, hypersexual behavior, attachment styles and psychological symptoms. Direct correlation between limitations in the capacity to love and psychological symptoms were found together to hypersexual attitude and insecure attachment styles. Also, predictive role of limitations of capacity of love together to preoccupied attachment style and psychopathological symptoms were found for hypersexual attitude. Therefore, limitations to the capacity of love and related psychological aspects, i.e., the insecure attachment negatively conditionate the sexual behavior.

## INVOLUNTARY CELIBATE AS SUSPICIOUS AND SUFFERING MIND: PSYCHOLOGY AND PSYCHOPATHOLOGY OF INCEL PHENOMENON

*Lilybeth Fontanesi (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The term “Incel”, “involuntary celibate”, refers to the members of an online subculture, mainly composed of heterosexual men. These subjects find difficult or impossible to have a partner and they move on to attacks and manifestations of hatred towards the females, until they transform, in the most extreme cases, into actual violent acts no longer limited to the virtual world. This study aims to investigate possible psychopathological issues related to the Incel phenomenon. 720 males (aged 18-69, M age= 29.04) were administered a series of self-reported measures through the online platform QUALTRICS, investigating demographic information, Incel traits (ITS), depression (GAD-2), anxiety (PHQ-2), and paranoid symptoms (PTS-PAI). Pearson correlation and hierarchical linear regressions were performed to assess the relationship between variables. We found positive correlations between Incel scale and paranoia, anxiety and depression. Moreover, regression analysis showed relevant predictive values of paranoia and depression on the Incel scale. Incel subjects and their related behaviors towards couple life and the female world could be conditioned by several psychopathological issues. Clinicians should consider Incel people in the light of these psychopathological aspects.

## CAN SELF-PERCEIVED AND SOCIALLY BASED DYSFUNCTIONAL BELIEFS ABOUT AGEING BEAR ON SEXUAL ACTIVITY AND SEXUAL SATISFACTION OF ELDERLY PEOPLE? A COMPARISON BETWEEN HETEROSEXUAL AND HOMOSEXUAL MEN AND WOMEN

*Erika Limoncin (Dipartimento di Medicina dei Sistemi, Università degli Studi di Roma, Tor Vergata), Merylin Monroe (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Francesca Petracca (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Luca Flesia (Azienda ULSS 6 Euganea)*

No information exists about the quality, rather than the quantity, of sexual life of elderly people, considering several sexual orientations. Aim of this study was to evaluate: (1) the impact of ageism on sexual activity/sexual satisfaction of elderly heterosexual and homosexual persons and (2) the impact of self-perceived/socially perceived dysfunctional beliefs about elderly people on sexual activity/sexual satisfaction. The results showed no statistically significant difference between homosexuals and heterosexuals neither for the presence of ageism ( $p=0,47$ ), nor for the presence of dysfunctional beliefs about sexuality of elderly people ( $p= 0,38$ ). In terms of sexual behaviour, elderly homosexual people declared significantly higher frequency of sexual activities, compared to that referred by heterosexual persons ( $p=0,0039$ ). In line with these findings, also sexual satisfaction, expressed as global improvement in quality of sexual life, was found significantly higher in elderly homosexual people ( $p=0,0145$ ). Based on these data, it is possible to conclude that ageism and dysfunctional beliefs are present in equal manner in elderly people, despite their sexual orientation. In addition, the quality of sexual life seems to be higher in elderly homosexual people.

## COUPLES DEALING WITH SEXUAL DESIRE DISCREPANCY: NEW CLINICAL PERSPECTIVES AND FUTURE RESEARCH DIRECTIONS

*Filippo Maria Nimbi (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Recently, an increasing number of studies have tried to highlight how sexual desire works according to the biopsychosocial perspective. However, this area remains strongly lacking, especially regarding the psychological and relational factors connected to a variety of desire expressions and their effects on sexual and mental health. While sexual desire discrepancy, defined as the point in which partners in an intimate relationship report different desire levels or a different frequency of sexual activity, is acknowledged as an important clinical issue, there are few empirical studies focusing on sexual desire expressions in both members of the couples and their dynamics, including different sexual orientations and gender identities. In the present lecture, the results of the most recent research will be discussed concerning the use and disclosure of sexual fantasies, sexual communication trainings, and the clinical applications useful both in individual and couple treatments.

## NARCISSISTIC PERSONALITY TRAITS AND SEXUAL DYSFUNCTION IN WOMEN: THE ROLE OF BODY IMAGE SELF-CONSCIOUSNESS

*Sofia Pavanello Decaro (Università degli Studi di Milano-Bicocca), Marco Di Sarno (Università degli Studi di Milano-Bicocca), Annalisa Anzani (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Rossella Di Pierro (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Antonio Prunas (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

We aimed to evaluate the associations between self-reported pathological narcissistic traits, both grandiose and vulnerable, and sexual functioning in a large sample of nonclinical women. Given the link established in literature between body image and sexual functioning in women, we also tested body image self-consciousness, which we hypothesized could have a mediating role in these association. Participants (N = 656 women) completed online self-reports questionnaires. We carried out two mediation models, one for vulnerable narcissism, and the other for grandiose narcissism. The results highlight that vulnerable narcissistic traits are associated with lower sexual functioning, this association being mediated by higher levels of body image self-consciousness. Conversely, grandiose narcissistic traits are linked to lower body image self-consciousness and to higher sexual functioning. Considering the link between body image self-consciousness and sexuality is of utmost importance in clinical practice with women, as well as in promoting positive body appreciation. Clinicians working with individuals presenting with pathological personality traits should consider including an assessment of their sexual functioning.

# PROFESSOR COVID: WHAT WE LEARNED ABOUT RESILIENCE AND HOSPITAL PSYCHOLOGY DURING THE PANDEMIC. A CLINICAL JOURNEY THROUGH WOUNDED HEALERS, SICK HEARTS, CHILDREN IN ONCOLOGY AND SUICIDE

*Proponenti: Valentina Di Mattei (Applied Research Division for Cognitive and Psychological Science, Istituto Europeo di Oncologia IRCCS Milano - Dipartimento di Psicologia, Università di Milano Statale), Gabriella Preavettoni*

COVID-19 pandemic started as a medical emergency, but quickly evolved into a psychological emergency, highlighting the importance of mental health as a public health priority, especially concerning hospital psychology. In the last two years, several waves of infection have occurred, and the government has imposed strict restrictions to combat the spread of contagions. These unprecedented and prolonged conditions had psychological consequences, raising levels of psychiatric symptoms and the risk of suicide around the world, particularly among vulnerable and more exposed categories. The medical emergency highlighted the lack of formalized public mental health interventions and the lack of guidelines and recommendations. This symposium aims to investigate, after two years after COVID-19 outbreak, the impact of the pandemic on different high-risk categories, specifically healthcare workers, children with cancer, general population at risk for suicide, and patients hospitalized for COVID-19. The different contributions will offer an overview of the psychological response to the pandemic among different population samples and will highlight the need for formal integration of mental health interventions into public health.

## SUICIDE RISK DURING THE COVID-19 PANDEMIC

*Raffaella Calati (Università degli Studi di Milano-Bicocca), (), Guendalina Gentile (Dipartimento di Scienze Biomediche per la Salute, Università degli Studi di Milano Statale), Stefano Tambuzzi (Dipartimento di Scienze Biomediche per la Salute, Università degli Studi di Milano Statale), Riccardo Zoja (Dipartimento di Scienze Biomediche per la Salute, Università degli Studi di Milano Statale)*

Europe was among the continents most affected by the 2019 coronavirus pandemic (COVID-19). Italy, in particular, has reported a very high number of deaths, especially Lombardy. Considering the impact that the pandemic has had on individual mental health, an aspect of particular interest is the assessment of the incidence of suicide in the period preceding and concomitant with the pandemic, declared in March 2020. Therefore, this contribution will present the incidence of suicide in the Lombard provinces of Milan, Monza and Brianza, comparing it to the period preceding the pandemic. In particular, the incidence of suicide will be obtained through a retrospective analysis of all the autopsies performed in the period concomitant with the pandemic, 2020 and 2021, and in the period preceding the pandemic through the database of the Institute of Forensic Medicine of Milan. Data from other countries will also be considered in the presentation.



## LESSONS LEARNED FROM THE COVID-19 PANDEMIC FOR THE EVOLUTION OF PSYCHOSOCIAL HOSPITAL INTERVENTIONS IN PEDIATRIC ONCOLOGY

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The pandemic highlighted a widespread need for mental health support. While data have emerged collectively on the serious repercussions, particularly on the developmental population, only in a few contexts has there been any reflection on the support measures needed for the population suffering from serious organic pathologies, such as oncological ones. There is a need for debate within and outside the scientific community on ways of improving clinical psychological support for these patients, who are characterized by special needs, an area of clinical practice that is even more critical because it is largely characterized by professional insecurity, with few opportunities to combine research with care practice. The report analyses the experiences of the impact of the COVID-19 pandemic on support practices in a pediatric oncology ward, a high specialty setting, which can offer a contribution to other clinical contexts.

## PROVISION OF PSYCHOLOGICAL SUPPORT TO A 31-YEAR-OLD MAN WITH SARS-COV2-INDUCED PNEUMONIA DURING AND AFTER HOSPITALIZATION DURING THE FIRST WAVE, A CLINICAL CASE REPORT

*Edward Callus (Università degli Studi di Milano Statale - IRCCS Policlinico San Donato Milano)*

This is a clinical case report of a 31-year-old man who was hospitalized during the peak of the pandemic in the beginning of March 2020 in Milan. He was diagnosed with COVID-19 after losing consciousness, and his condition worsened as he became critically ill with SARS-COV2-induced pneumonia and he subsequently had to be intubated. He explicitly requested psychological support to a physician of the department where he was hospitalized for anxiety and panic due difficulty with breathing, insomnia and fear of death when requiring CPAP assistance. The patient was assisted remotely for two months for a total of 22 sessions (12 hours and 29 minutes) during hospitalization and after discharge. He was tested for depression (Patient Health Questionnaire), anxiety (The Generalized Anxiety Disorder (GAD-7)), post-traumatic stress disorder (The Impact of Event Scale (IES-R) ) and insomnia (The Insomnia Severity Index (ISI)), longitudinally for 4 times, beginning just before discharge and during the follow-up. The patient presented moderate depression, severe anxiety, presence of post-traumatic stress disorder and sleep problems during the initial psychometric evaluation which decreased during follow-up, until the patient reported no distress in all areas during the final evaluation.

## RISK AND PROTECTIVE FACTORS FOR HEALTHCARE WORKERS' MENTAL HEALTH: A FOCUS ON THE FIRST YEAR OF THE PANDEMIC

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Since the beginning of the outbreak, public attention focused on healthcare workers' stressful conditions and increased workloads. Notwithstanding, healthcare workers' mental health may have varied over the last two years depending on the stage of the outbreak. In this contribution we present findings from a longitudinal study that examined the experiences of healthcare workers at three moments in time (after the main peak of the COVID-19 outbreak in Italy, during the second wave, and after the third wave). The third phase of the study (conducted between May 22 and July 9, 2021) sought to investigate the long-term psychological consequences of the COVID-19 pandemic on Italian healthcare workers. One hundred eighty-nine healthcare workers took part in all three online surveys, completing questions on socio-demographic and work-related information, and on perceived social support, coping strategies, feelings of anger, depression, anxiety, stress, insomnia, burnout, and PTSD symptoms. In general, healthcare workers experienced subclinical psychiatric symptoms during the first year of the pandemic. Despite the subthreshold distress scores obtained by our sample, subsyndromal symptoms can provoke distress, impair functioning, affect the quality of care, and necessitate intervention.

# **A BRAVE BEW WORLD: THE ALTERNATIVE MODEL OF PERSONALITY DISORDERS AND THERAPEUTIC INNOVATIONS**

*Proponente: Andrea Fossati (Facoltà di Psicologia, Università Vita-Salute San Raffaele Milano)*

DSM-5 proposed a new dimensional model for the assessment of personality disorders (PDS), in order to overcome the well-known poor validity issues of the categorical model of personality disorders, to provide a trans-theoretical framework for assessing personality pathology across the life cycle, to promote early identification of emerging personality dysfunctions in adolescence/childhood, and to improve our understanding of the continuities between psychopathological dimensions, dysfunctional personality profiles, and even potentially adaptive features. Against this background, the symposium will cover different applications of this dimensional approach, spanning from clinical adolescence, new therapeutic applications in adults, to latent structures of psychopathology and personality dysfunctions among community-dwelling adults.

## THE ROLE OF DYSFUNCTIONAL PERSONALITY DOMAINS IN DIFFERENTIATING ORTHOREXIA FROM EATING DISORDERS IN ITALIAN COMMUNITY-DWELLING ADULT WOMEN

*Antonella Somma (Facoltà di Psicologia, Università Vita-Salute San Raffaele Milano)*

To evaluate the similarities and differences between orthorexia and eating disorders (EDs), 409 Italian community-dwelling adult women were administered the Eating Habits Questionnaire (EHQ) and the Eating Attitude Test-26 (EAT-26), as well as measures of obsessive-compulsive spectrum disorders (OCSD), attitudes towards appearance, and dysfunctional personality domains. Results showed that Orthorexia and ED measures were substantially inter-related,  $r = .55$ ,  $p < .001$ , although the relationship was asymmetrical with the majority of possible ED participants showing orthorexia, whereas the majority of participants scoring high on orthorexia measures showed no possible ED condition. Moreover, after controlling for ED, no significant association was observed between orthorexia and OCSD and dysfunctional personality measures, as well as with the majority of sociocultural attitudes towards appearance.

## PERSONALITY FUNCTIONING, AUTONOMIC DYSREGULATION, EMOTION DYSREGULATION: PRELIMINARY FINDINGS AND TREATMENT PERSPECTIVES

*Lucia Sideli (Dipartimento di Scienze Umane, Lumsa Università di Roma), Anna Chiara Franquillo (Dipartimento di Scienze Umane, Lumsa Università di Roma), Camilla Guccione (Dipartimento di Scienze Umane, Lumsa Università di Roma), Arianna Cantiano (Dipartimento di Scienze Umane, Lumsa Università di Roma), Renato Carpentieri (Dipartimento di Scienze Umane, Lumsa Università di Roma), Riccardo Pecora (Dipartimento di Scienze Umane, Lumsa Università di Roma), Lucrezia Trani (Dipartimento di Scienze Umane, Lumsa Università di Roma), Giuseppe Ducci (Dipartimento di Salute Mentale, ASL Roma 1), Vincenzo Caretti (Dipartimento di Scienze Umane, Lumsa Università di Roma)*

Emotion dysregulation represents a transdiagnostic marker of psychopathology. Cardiac markers of autonomic dysregulation may be promising measures of emotion dysregulation, but research in the field is still scant. This study aimed to investigate the association between autonomic dysregulation, emotion dysregulation, and personality functioning in adolescents referred to a youth mental health service. Fourteen adolescents with moderate personality impairment were administered the semi-structured interviews for personality functioning according to the DSM-5 AMPD. Cardiac activity was recorded before, during, and after the interview. Findings suggested increased sympathetic activity (Low frequency:  $F=12.82$ ,  $p<0.001$ ) during the clinical interview, as compared to the resting conditions. Furthermore, we observed a decreased parasympathetic activity (Heart period:  $F=18.91$ ,  $p<0.001$ ) during the identity and the empathy domains, as compared with the recovery condition (Bonferroni corrected  $p<0.05$ ). The findings suggest the presence of emotional dysregulation, as shown by markers of autonomic dysregulation. Adolescents with personality impairment may benefit by integrated psychological interventions, aimed to improve emotion regulation and body-mind integration.

## STUDYING THE SUICIDAL PROCESS AND MOTIVATION IN ADOLESCENCE: THE CONTRIBUTION OF PERSONALITY INVENTORY FOR DSM 5

*Riccardo Williams (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Marta Moselli (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Background: Personality pathology is considered as an important risk factor for suicidality in adolescence. Different pathological organizations contribute to shape diverse motivations for the suicidal process. The PID is a reliable and valid instrument for the assessment of the core domains and traits of personality pathology in adolescence, already associated to suicidality. In this study, the relationship between personality pathology as evaluated through the PID and the diverse steps of the suicidal process and the specific suicidal motivations as assessed through the Motivational Interview for Suicide is investigated. Methods: A sample of 100 boys and girls aged 13 to 18 were administered the PID-A, Columbia Suicide Severity Rating Scale and MIS. Statistical associations between PID domains and traits and MIS categories as well as CSSRS scores for ideation, suicide attempts and potential lethality were reckoned. Results: Data show that PID domains of negative affectivity and lack of inhibition are significant factors associated with suicide attempts and potential lethality, and specific motivational areas. Discussion: The overall dimensional profile of personality pathology warranted by the PID is helpful for clinical understanding of suicidality in adolescence.

## THE JOINT HIERARCHICAL STRUCTURE OF PSYCHOPATHOLOGY AND DYSFUNCTIONAL PERSONALITY DOMAIN

*Andrea Fossati (Facoltà di Psicologia, Università Vita-Salute San Raffaele Milano)*

To examine the hierarchical structure of psychopathology and dysfunctional personality domains 2,416 community-dwelling adult volunteers were administered a set of psychometrically-sound psychopathology measures and the Personality Inventory for DSM-5 Brief Form+ (PID-5-BF+). Parallel analysis, minimum average partial, and very simple structure results suggested that 1-6 principal component (PCs) should be retained. Goldberg's bass-ackwards model of the joint psychopathology measure and PID-5-BF+ domain scale correlation matrix evidenced a hierarchical structure that was consistent with the working model proposed by the Hierarchical Taxonomy of Psychopathology (HiTOP) consortium. Hierarchical agglomerative cluster analysis around latent variables of the psychopathology indicators and PID-5-BF+ domain scales recovered four latent dimensions, which were akin to the corresponding bass-ackwards components and nicely reproduced the HiTOP Internalizing, Externalizing, Thought Disorder, and Eating Pathology dimensions.



# ADVANCES IN VIRTUAL REALITY FOR ASSESSMENT AND TREATMENT IN CLINICAL PSYCHOLOGY

*Proponente: Maria Cristina Verrocchio (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Immersive Virtual Reality (VR) is an innovative tool for improving research, assessment, and therapy in the field of mental health. Promising results have been reached in the evaluation and treatment of different dysfunctional conditions. This symposium examines the role of VR in clinical psychology and provides valuable insights towards the improvement of research and practice. Five topics were chosen to debate the most recent applications of VR in clinical psychology. Ales and Zennaro present a review of the current state of the art regarding the use of VR to investigate various aspects related to psychopathology and personality assessment. Roma et al. focus on the role and potential applications of VR in the treatment of sex offenders and perpetrators of intimate partner violence. Fontanesi et al. discuss the development of a protocol that includes the use of VR and clinical measurements in the evaluation and treatment of paraphilias. Mazza et al. illustrate a study on the memory performance of participants who were exposed to the same environment through VR, in vivo, and 2D pictures. Merlo and Pappalardo illustrate the VESPA 2.0, a funded project structuring VR neurocognitive rehabilitation interventions and preliminary findings derived from its clinical application.

## NEW ADVANCES IN PSYCHOLOGICAL ASSESSMENT: A REVIEW ON THE USE OF VIRTUAL REALITY IN CLINICAL PRACTICE

*Francesca Ales (Università degli Studi di Torino), Alessandro Zennaro (Università degli Studi di Torino)*

Traditionally, psychological assessment has been conducted through self-administered tools, interviews, informant-reports, and performance-based tests. However, self-reports may be subject to various types of bias, informant-reports may not be the most suitable instrument to investigate the subjective experience of the patient, and performance-based measures may be very difficult and time-consuming to administer, score and interpret. Therefore, scientific research has increasingly focused on solutions for assessing individuals' behavior while preserving as much as possible the ecological validity. This is done via the development of quasi-real situations that reproduce as faithfully as possible the daily life conditions of the subject. In this regard, Virtual Reality offers the possibility of creating scenarios that reproduce everyday life contexts in which individuals personality can be measured in an ecological way. This study reviews the use of VR in clinical practice to investigate various aspects related to psychopathology and personality assessment. Implications on VR potentiality and its efficacy in understanding human behavior and planning treatment of certain psychopathological conditions will be discussed.

## TESTING MEMORY OF A VR ENVIRONMENT: COMPARISON WITH THE REAL ENVIRONMENT AND 2D PICTURES

*Cristina Mazza (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara), Merylin Monaro (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Eleonora Ricci (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara), Eleonora DIntino (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara), Matteo Gatti (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Rocco Palumbo (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

In recent years, there has been a growing trend in cognitive psychology research towards recreating experimental situations in virtual reality (VR). However, it remains controversial whether cognitive performance in VR settings is similar to performance in real life. The present study tested the memory performance of three groups of participants who were exposed to the same environment (a room) through different modalities: in vivo, in virtual reality (VR), and through two-dimensional (2D) pictures. The results highlighted that participants who were exposed to the target room in vivo remembered significantly more details during a free recall task, made fewer errors in a visual recognition task, had more accurate verbal and visual memory, and were more resistant to visual and verbal suggestions, compared to participants who saw the room in VR or through 2D pictures. On the other hand, no differences emerged on any memory task between participants in the VR setting and participants who engaged with the task via 2D pictures. The results suggest that future research should be careful in assuming that performance in VR settings is comparable to that of real-life settings, and that VR is more ecological than traditional 2D media.

## VIRTUAL REALITY APPLICATION FOR NEUROCOGNITIVE AND DEVELOPMENTAL DISORDERS: THE VESPA 2.0 PROJECT

*Emanuele Maria Merlo (Università degli Studi di Messina), Salvatore Marco Pappalardo (Software Engineering Italia srl, Catania)*

The application of Virtual Reality (VR) in the treatment of neurocognitive disorders is gaining consents within the scientific community. Through a comprehensive review of scientific literature, it is possible to realise how the multitude of VR applications are constantly updated, together with their targets. The clinical application of virtual reality demonstrated to represent a valid issue, supporting or by replacing classical clinical practices. This fact is both related to psychological testing and therapy. Several contributions described VR application and its key role as a growing and promising domain. The possibilities offered by VR and its applications for the treatment of neurocognitive diagnostic realities have been highlighted by relevant literature contributions, in order to offer evidence directly related to results and expected responses. VESPA 2.0 represents a funded project providing for rehabilitative tasks dedicated to adult and developmental diagnostic domains, as in the case of Alzheimer's and Parkinson's Disease, Multiple Sclerosis, as well as Intellectual Disability and Communication disorders. The present contribution is aimed at presenting VESPA 2.0 structure and preliminary findings derived from clinical application of structured tasks and batteries.

## THE ROLE OF VIRTUAL REALITY IN THE TREATMENT OF SEX OFFENDERS AND PERPETRATORS OF INTIMATE PARTNER VIOLENCE (IPV): POSSIBLE APPLICATIONS

*Paolo Roma (Dipartimento di Neuroscienze Umane, Sapienza Università di Roma), Marco Colasanti (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Silvia Biondi (Dipartimento di Neuroscienze Umane, Sapienza Università di Roma)*

Theoretical models of aggression have linked the perpetration of violent acts to an impairment in recognizing the victims' emotions and understanding their perspective (Blair, 1995; Romero-Martinez et al., 2016). Indeed, many studies supported the association between aggression and a lack of empathy (Jolliffe and Farrington, 2004), and pointed out that violent individuals have difficulty recognizing emotions such as fear and anger, preventing them to inhibit aggressive behaviors (Marsh and Blair, 2008). Seinfeld and colleagues (2018) have applied, for the first time, Virtual Reality (VR) technologies to the study of the relationship between empathy, emotion recognition, and aggressive behaviors. VR environments can be highly immersive and presence-inducing and can offer, at the same time, agency and control over their virtual contents (Johnson-Glenberg et al., 2021), making them a prime candidate for perspective-taking studies. Results highlighted that it is possible to change, via immersive VR experiences, the perspective of intimate partner violence perpetrators, modifying the socio-perceptual processes, such as emotion recognition, that are associated with this specific form of aggressive behavior. Future directions will be discussed.

## VIRTUAL ENVIRONMENT REALITY IN ASSESSMENT AND TREATMENT OF SEXUAL PARAPHILIAS

*Maria Cristina Verrocchio (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Daniela Marchetti (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Lilybeth Fontanesi (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Paraphilias are unhealthy sexual interests, behavior, or fantasies, and can become a mental disorder. Nonetheless, this definition is still controversial. Determining what can fall under the definition of paraphilic disorder is of utmost relevance, not only for clinical reasons, as providing the most adequate treatment, but also for forensic purposes, in case of criminal responsibility, child custody and relapse prevention. In this presentation we will discuss the research on biological underpinning of pedophilia, as well as the use of eye tracker and EEG in the assessment of this specific disorder. Pedophilia, in fact, is the most debated paraphilia and a hideous crime, with a huge cost in terms of public health and safety. Research on the topic can be described as weak, in terms of positive outcomes and recidivism rate, because of major ethical and methodological problems. Due to that, the development of an innovative assessment protocol that includes non-invasive biometric markers and clinical measurements that differentiate between paraphilic interest and paraphilic disorder using Virtual Reality (VR) was developed. Moreover, a treatment protocol that includes VR cognitive-behavioral and psychosexual therapy to reduce paraphilic interests and recidivism will be presented.

## **BECOMING FATHERS: A MULTIDIMENSIONAL PERSPECTIVE ON THE INTERPLAY AMONG CHALLENGES AND RESOURCES**

*Proponente: Sara Molgora (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Literature has progressively highlighted transition to fatherhood as a complex and challenging process characterized by the interplay of several risk and protective factors. The aim of this symposium is to explore the dimensions of this transition, considering its specificity through complementary perspectives. We will deepen the subjective experience of becoming fathers and the impact of childbirth on fathers' psychological well-being and on their relationship with the baby over time. The first contribution by Rollè explores fathers' reflections on fatherhood through a qualitative study that allows to deepen the subjective dimension and the interactive construction of meanings among the peer group. The second contribution by Molgora investigates primiparous fathers' psychological well-being from pregnancy to 12 months postpartum, analyzing the predictive role of obstetric, individual and relational variables. The third contribution by Agostini explores fathers' psychological adjustment and parental stress in the context of preterm birth through a longitudinal design up to 12 postpartum months. The fourth contribution by Lucarelli explores the quality of father-infant interactions from 1 month to 3 years and analyzes the psychometric properties of the Feeding and Play Scale.

## PATERNAL AFFECTIVE STATES AND PARENTING STRESS IN THE FIRST POSTPARTUM YEAR AFTER A SEVERE PRETERM BIRTH

*Francesca Agostini (Dipartimento di Psicologia, Università di Bologna), Federica Genova (Dipartimento di Psicologia, Università di Bologna), Marcello Stella (Pediatric and Neonatal Intensive Care Unit, Maurizio Bufalini Hospital, Cesena), Augusto Biasini (Donor Human Milk Bank Italian Association (AIBLUD) Milano), Erica Neri (Dipartimento di Psicologia, Università di Bologna)*

Transition to fatherhood after a preterm birth may be particularly challenging and represent a risk for psychopathological expressions. The study aims to investigate the course of depressive symptoms in fathers during 12 months after a preterm birth, evaluating the role played by severity of prematurity, parenting stress, partners' depressive symptoms. 165 fathers and their partners were recruited: 85 were preterm babies' fathers, divided into 47 VLBW group (Very Low Birth Weight babies: birthweight 1000-1500 gr) and 38 ELBW (Extremely Low Birth Weight infants: birthweight <1000 gr). Control group was composed by 80 full-term infants' fathers. All parents completed Edinburgh Postnatal Depression Scale (EPDS) and Parenting Stress Index-Short Form (PSI-SF) at 3, 9 and 12 months postpartum. The 3 groups did not differ on fathers' EPDS scores, but differed on partners' EPDS scores and Parental Distress, both higher for ELBW group. Specific analyses will be presented to assess the potential contribution to fathers' EPDS scores of severity of prematurity, dimensions of parenting stress and mothers' affective states. The study highlights the relevance of longitudinally monitoring the affective experience of fatherhood in a specific context where potential vulnerability might arise.



## PREDICTIVE FACTORS OF POSTPARTUM PSYCHOLOGICAL STATUS IN PRIMIPAROUS FATHERS

*Sara Molgora (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Federica Facchin (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Chiara Fusar Poli (Università Cattolica del Sacro Cuore)*

The birth of a child represents a critical and potentially stressful experience for fathers. Several studies reported that a relevant percentage of new fathers shows anxiety and depressive symptoms, along with parental stress during the transition to fatherhood. Different variables can have an impact on this experience. The aim of this contribution was to investigate the psychological status of new fathers, identifying risk and protective factors during pregnancy. Forty-five primiparous fathers completed a questionnaire composed of the following scales: EPDS, STAI, MSPSS, DAS and PSI. The questionnaire was completed at three assessment times: the third trimester of pregnancy, 3/6 months postpartum, and 9/12 months postpartum. Findings revealed that fathers' psychological distress at 9/12 months postpartum was predicted by their own psychological status during pregnancy. Furthermore, fathers' postpartum mental health was predicted by their perceived antenatal social support. Finally, fathers' postpartum well-being was predicted by women's antenatal anxiety and depressive symptoms, and by their perceived social support. The results confirm the predictive role of individual and relational variables on fathers' postpartum well-being, also showing an interdependence between partners

## A CROSS SECTIONAL STUDY OF THE EARLY FATHER-DAUGHTER/ SON FEEDING AND PLAY INTERACTIONS

*Laura Vismara (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Cristina Sechi (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Loredana Lucarelli (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari)*

The observation of the feeding and play interactions of the child with her/his caregiver offers the opportunity to evaluate the quality of their relationship within different domains. Considering the increasing role of fathers in the care of young children, in this study we evaluated the exchanges between fathers and their infants. 142 fathers-infant/toddler dyads (MAge = 36.9 years, SD = 5.8 years) - 51% boys and 49% girls - were cross-sectionally evaluated through the Feeding Scale (FS; Chatoor et al., 1997) and The Play Scale (PS; Chatoor et al., 2018) at different developmental stages, from 1 month to 3 years of the child's age. Analyses demonstrated significant correlations between dyadic reciprocity during feeding and during play showing that positive interactions during play carry over into feeding and vice versa. On the contrary, paternal unresponsiveness and intrusiveness during play correlated significantly with paternal conflict during feeding highlighting paternal difficulty to tune into the child in both situations. The observation of maladaptive father and child behaviours during feeding and play interactions can, at first, orient intervention, and, later, highlight the occurring changes within father-infant/toddler interactions during and after intervention.

## BEING FATHERS: FATHERHOOD DESCRIBED BY FATHERS

*Luca Rollè (Dipartimento di Psicologia, Università degli Studi di Torino), Tommaso Trombetta (Dipartimento di Psicologia, Università degli Studi di Torino), Chiara Bertone (Department of Law and Political, Economic and Social Sciences, University of Eastern Piedmont, Italy), Raffaella Ferrero Camoletto (Dipartimento di Culture, Politica e Società, Università degli Studi di Torino), Maria Noemi Paradiso (Dipartimento di Psicologia, Università degli Studi di Torino), Laura Elvira Prino (Dipartimento di Filosofia e Scienze dell'Educazione, Università degli Studi di Torino)*

The transition to fatherhood, the role of fathers, and their changes are issues that have received increasing attention because of their implications for the well-being of fathers, their children, and their partners. A key aspect in fatherhood is the influence of the shared masculine representation of paternal role. The aim of this paper is to explore how men talk to each other about fatherhood, what language they share to give sense to their behaviors. The study was based on five focus groups in which have been involved 26 fathers. The first aspect is the recognition of a major change, the need to overcome past models of masculinity and fatherhood, characterized by authority and detachment in relationships, to build new boundaries, but with still uncertain and variable contents. A new fatherhood emerges, less rigidly defined, for which emotional and relational skills, abilities in negotiations of tasks and practices are essential. A greater complexity in which today's fathers do not always easily recognize themselves, as it does not correspond to models, and representations they grew up with, and which requires an expansion of the repertoire of paternal practices that are often not yet fully legitimized at the societal level, especially from men.

## BIOPSYCHOSOCIAL FACTORS IN THE EXPERIENCE OF CHRONIC PAIN

*Proponente: Luca Iani (Università Europea di Roma)*

Pain is experienced and expressed in a unique way by each patient. A biopsychosocial model of pain views it as the result of a dynamic interplay among biological, psychological, and social factors that perpetuate and even worsen the clinical presentation (Gatchel & McGeary, 2021). The aim of this Symposium is to present some studies on the role of biopsychosocial factors in the experience of chronic pain. In the first contribution, De Vincenzo and colleagues examine the role of cognitive and emotional factors in predicting mental pain in patients with chronic migraine and low-back pain. The second presentation by Romeo and colleagues examines personality, defence mechanisms and psychological distress in women with fibromyalgia. The third contribution by Ciacchelli and colleagues describes the results of a pilot case-control study on different neural responses to pain-related visual stimuli in women with fibromyalgia and chronic low back pain. The fourth presentation by Perlini and colleagues examines the state of the art in the implementation of psychological interventions for chronic headache in adults. The final contribution by Tossani et al. examines the role of mental pain in predicting psychological distress in chronic physical pain.

## DIFFERENT NEURAL RESPONSES TO PAIN-RELATED VISUAL STIMULI BETWEEN WOMEN WITH FIBROMYALGIA AND CHRONIC LOW BACK PAIN: A PILOT CASE-CONTROL STUDY

*Chiara Ciacchella (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Giorgio Veneziani (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Federica Luciani (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma),  
Carlo Lai (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

Fibromyalgia (FM) is a disorder characterized by chronic widespread musculoskeletal pain that occurs in absence of organic damage and whose causes remain unclear. This pilot study aimed to investigate the neural and psychological differences among FM, chronic low back pain (CLBP), and health conditions. After a clinical assessment, brain responses to algic and not algic visual stimuli of 23 women (12 FM, 6 CLBP, 5 healthy volunteers) were recorded. Event-related potentials (ERPs), standardised low-resolution electromagnetic tomography data, and psychological symptoms (Symptom Checklist-90-Revised) were analysed. Women with FM reported different frontal ERPs in response to algic stimuli than women with CLBP. Increased activity was found for FM women in response to algic stimuli than not algic ones, mainly on the hippocampus and the posterior cingulate cortex. Lastly, FM women presented higher somatization, obsession-compulsion, depression and positive symptom distress scores than the healthy women. These preliminary results suggest that although the symptoms appear analogous in FM and CLBP, the neural response to pain could be different. Moreover, these findings provide evidences about the great alert and the central sensitivity to pain-related information of FM women.

## COGNITIVE AND EMOTIONAL FACTORS IN THE REGULATION OF PAIN EXPERIENCE IN PATIENTS WITH MIGRAINE AND LOW-BACK PAIN

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The aim of this study was to investigate whether sociodemographic factors, worry, rumination, psychological distress, suppression, and acceptance predicted mental pain in patients with chronic pain (migraine; low-back pain). 101 patients (migraine:n=48, Mage=44.00; low-back pain:n=53, Mage=66.15) attending the Center for Diagnosis and Therapy of Migraines and the Pain Center “Enzo Borzomati” (Policlinico Umberto I, Rome) were enrolled in the study. Eligible patients had a diagnosis of migraine or low-back pain, were 18 years of age or more, and had no neurological or mental disorders. Two hierarchical multiple regressions were conducted to determine which cognitive and emotional factors predicted mental pain. The results showed that worry about pain and psychological distress were significant predictors of mental pain in patients with migraine, whereas age and psychological distress contributed to the prediction of mental pain in patients with low-back pain. The findings of this study pave the way for further research on how cognitive and emotional processes may counteract the effects of mental pain in chronic pain patients. Interventions aimed to promote psychological protective factors may contribute to increase psychological well-being and reduce mental pain in these patients.

## FROM RESEARCH TO CLINICAL PRACTICE: STATE OF THE ART ON THE IMPLEMENTATION OF PSYCHOLOGICAL INTERVENTIONS FOR CHRONIC HEADACHE IN ADULTS

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Psychological interventions have been proved to be effective in chronic headache (CH). Despite that, their actual implementation into standard clinical settings has not been explored yet. In order to fill this gap, we systematically explored papers on CH in adult population published in the last 15 years. We also asked the corresponding authors to fill in a survey, and explored websites of the clinical centers mentioned in the papers. Results showed that most of the interventions were administered on an individual-basis and included CBT, multi-disciplinary treatments, relaxation training, and biofeedback (duration: 1 day-9 months), suggesting that they were effective, in particular in reducing the frequency of attacks. Thirty-five per cent of the researches was performed in academic contexts, 39% in clinical settings, and 25% in pain/headache centres. Interventions providers were professionals with certified experience. Most of the studies have been granted with private or public funding. Two authors replied to our survey. Only in 3 out of the 16 available websites a reference to the implementation into the clinical setting was reported. Contextual barriers and facilitators of the implementation of intervention in chronic headache in adult population will be discussed.

## PERSONALITY, DEFENCE MECHANISMS AND PSYCHOLOGICAL DISTRESS IN WOMEN WITH FIBROMYALGIA

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The present study aimed to investigate both personality traits and defence mechanisms, and their impact on psychological distress (anxiety and depressive symptoms) in patients with fibromyalgia (FM) compared to chronic-pain free women (HC). In order to reach these goals, 54 women with FM and 54 HC were asked to fill in the following measures: (1) Temperament and Character Inventory–Revised; (2) Toronto Alexithymia scale; (3) Defense Style Questionnaire and (4) Hospital Anxiety and Depression Scale. The results indicated that FM patients displayed higher alexithymia ( $p < .001$ ), higher harm avoidance ( $p < .001$ ), lower self-directedness ( $p = .003$ ), lower persistence ( $p < .001$ ), higher use of maladaptive defence style ( $p < .001$ ) and higher levels of psychological distress ( $p < .001$ ), compared to HC. Moreover, we found that in the final model,  $[F(1, 47) = 9.222, p = .004]$  alexithymia ( $p = .004$ ), harm avoidance ( $p = .014$ ) and maladaptive defence style ( $p = .015$ ) were significant predictors of psychological distress in FM patients. These results show a particular personality and defence profile of FM patients and the role of these psychological variables in the levels of distress. Moreover, the present findings could help clinicians in the diagnosis and treatment of FM patients.



## DOES MENTAL PAIN PREDICT PSYCHOLOGICAL DISTRESS IN CHRONIC PHYSICAL PAIN?

*Eliana Tossani (Dipartimento di Psicologia, Università di Bologna), Silvana Grandi (Dipartimento di Psicologia, Università di Bologna)*

Mental pain is defined as an acute state of intense psychological pain associated with negative cognitive and emotional aspects of the self – i.e., thoughts of self-disappointment or inadequacies and feelings of guilt, anguish, fear, panic, angst, loneliness, and helplessness often accompanied by a sense of disconnection, loss, or incompleteness of the self. Over the years, a growing body of evidence has underlined the transdiagnostic nature of this construct as mental pain has been found to be a risk factor for a wide variety of psychological problems. Our contribution explores the concept of mental pain in the context of the affective dimension of chronic pain, in particular, we will present the current state of knowledge concerning the potential protective role of mental pain tolerance in chronic physical pain. Improving our understanding and operationalization of the subjective experience of mental and physical pain might facilitate innovative multidisciplinary research in this field. Rather than avoid the experience of pain, the abilities to feel and tolerate it should be included as clinical strategies aimed to better alleviate and treat psychological distress in the context of chronic physical pain.

## PATIENTS AND CARERS' PSYCHOSOCIAL PROTECTIVE FACTORS IN CHRONIC DISEASE MANAGEMENT

*Proponente: Eleonora Volpato (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore - IRCCS Fondazione Don Carlo Gnocchi, Milano - Early Career Researchers Network (E-CARE) of the AIP, Clinical and Psychodynamic Psychology Section)*

This symposium provides an overview of the latest research on patients and caregivers' psychosocial protective and risk factors involved in chronic disease management, carried out by some researchers belonging to the Early Career Researchers' Network (E-CARE) of the AIP, Clinical and Psychodynamic Psychology Section. In the first contribution, Giusti conducted a systematic review aiming to investigate the role of interactional, couple-related, or couple-level variables in shaping the relationship between the patient's psychological traits or states and the patient's perception of pain. In the second part, Lenzo studied the relationships between the perceived support at the time of assistance, insecure attachment, and the prolonged grief symptoms in family caregivers of palliative care patients. The third contribution, by Volpato, explored the experiences of people with neuromuscular and chronic respiratory diseases and their caregivers in tracheostomy management during the COVID-19 health emergency in Italy. Finally, Lombardi investigated the psychological consequences such as anxiety, depression and worries about becoming ill in those who undergo a genetic test. The modifiable factors that might be involved to ensure greater effectiveness of interventions will be discussed.

## THE PROTECTIVE ROLE OF COUPLE-RELATED VARIABLES IN SHAPING THE RELATIONSHIP BETWEEN PSYCHOLOGICAL TRAITS AND STATES AND THE EXPERIENCE OF CHRONIC PAIN: A SYSTEMATIC MAPPING REVIEW

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Chronic pain has a multifactorial aetiology and various biological, psychological and social factors favour or protect against its onset and persistence. Multiple reviews identified the predictive or protective effect of various psychological variables, but also pointed out that the role of interpersonal variables has not yet been examined adequately. The aim of this review is to map the evidence about the role of couple-related variables in shaping the relationship between the patient's psychological state and their pain experience. A systematic search was performed to identify studies on chronic pain populations and which assessed both pain-related and psychological variables, either as predictors or as outcomes, and the role of couple-related variables in influencing the relationship between these variables. The results show that both the individual beliefs of the partner regarding the patient's pain condition and their actual responses to the patient's display of pain buffer the relationship between patient's psychological states and pain. Gaps remain in the research about the role of dyadic variables. The results of this review suggest that interactional and relational factors should be taken into account for the development of more effective treatments for chronic pain.

## THE MODERATING ROLE OF INSECURE ATTACHMENT STYLE IN THE RELATIONSHIP BETWEEN PERCEIVED SUPPORT AND PROLONGED GRIEF IN FAMILY CAREGIVERS OF PALLIATIVE CARE PATIENTS

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This study sought to investigate the relationships between the perceived support at the time of assistance, insecure attachment (i.e., avoidance and anxious attachment factors), and the prolonged grief symptoms in family caregivers of palliative care patients deceased. We also investigated the moderating role of insecure attachment in the relationship between perceived support and the intensity of prolonged grief symptoms. A sample of 157 participants completed the Prolonged Grief Scale (PG-13) and the Attachment Style Questionnaire (ASQ). Correlational analysis indicated that prolonged grief symptoms were positively correlated with the Avoidance attachment factor but not with the Anxious one. The perceived support was negatively related to both the Avoidance and the Anxious attachment factors. Results of moderation analysis showed that the high Avoidance, but not Anxious, attachment moderated the effect of the perceived family and social support on the intensity of prolonged grief symptoms among family caregivers. Our findings suggest that a high level of avoidance attachment may moderate the relationship between the perceived support and intensity of grief symptoms and thereby increasing the risk of developing a mental disorder.

## ITALIAN WOMEN UNDERGOING GENETIC TESTING FOR CANCER SUSCEPTIBILITY GENES: PERSONALITY TRAITS AS RISK FACTORS OF CANCER WORRY

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Personality traits may affect psychological adjustment to risk condition of individuals who undergo genetic test. They have to deal with psychological consequences such as anxiety, depression and worries about becoming ill. This study aimed to analyze (1) if there are differences in cancer worry, anxiety and depression levels between affected and healthy females, (2) if social support is negatively associated with levels of cancer worry, anxiety and depression, (3) if personality characteristics could predict cancer worries. One hundred females undergoing genetic test were enrolled in this study (mean age=46,63 years; s.d.=10,57; 60% cancer affected), and completed questionnaires about psychological adjustment, personality traits and cancer worry. No differences were found between affected and healthy females in cancer worry, anxiety and depression. Furthermore, we found that social support was not negatively associated with levels of anxiety, depression and cancer worry. Regarding personality traits we found that vulnerability was the main risk factor for high levels of cancer worry, followed by defensiveness. This study highlighted the importance of considering vulnerability and defensiveness as risk factors of cancer worry.

## THE SENSE OF GRIP ON CHRONIC DISEASE IN PRIMARY CARE SETTING

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Adopting a socio-constructivist perspective, we intend to present a research on the Sense of Grip on chronic Disease (SoGoD). SoGoD is a conceptual framework developed to detect narrative processes through which people make meaning of their disease. In the context of primary care, we administered an ad hoc narrative interview (Freda et. al 2019) to 31 people with Non-Communicable Diseases. The corpus of interviews has been analyzed through an original semiotic methodology based on the exploration of five narrative functions: 1. Organization of temporality; 2. Integration of disease; 3. Expression of emotions; 4. Orientation to action; 5. Social sharing. These functions are representative of different dimensions of narrative sense-meaning-making processes and foster different dimensions of adjustment to illness (De Luca Picione, Freda, Savarese 2021). Starting from the coding of the interviews, we carried out a Multiple Correspondence Analysis (MCA) and a consequent Cluster Analysis to identify different profiles of Sense of Grip, each one with specific characteristics of sense-meaning-making processes. These profiles could help clinicians to encourage patients' adjustment to disease.

## RISK, VULNERABILITY, AND PROTECTIVE FACTORS IN LIVING WITH A TRACHEOSTOMY IN TIMES OF COVID-19

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The study aimed to explore the experiences of people with neuromuscular and chronic respiratory diseases and their caregivers concerning tracheostomy management at home during the COVID-19 health emergency in Italy. In a multiple case study approach, we sought perspectives through semi-structured interviews of caregivers and patients with neuromuscular or chronic respiratory diseases and tracheostomy. In addition, the following instruments were used: Connor and Davidson Resilience Scale (CD-RISC-25), to detect resilience; Acceptance and Action Questionnaire-II (AAQ-II), to detect flexibility; State-Trait Anxiety Inventory (STAI), to detect trait anxiety; Langer Mindfulness Scale (LMS), to measure dispositional mindfulness; Zarit Burden Interview (ZBI) to detect caregiver's burden. Qualitative analyses, based on Interpretative Phenomenological Analysis (IPA), were used to identify themes, sub-themes, frequency of words and metaphors. Twenty-two patients [50% female, Mean age=50.2±21.2] and 52 caregivers [62.3% female, Mean age 52.2±1.22] took part in the study. The demonstration of a relationship between resilience, flexibility, anxiety, and dispositional mindfulness offers the opportunity to reinforce the management of tracheostomy at home, even in emergency periods.

## EMOTIONAL DYSREGULATION AND ITS VARIOUS MANIFESTATIONS: AN UPDATE

*Proponente: Agata Andò (Dipartimento di Psicologia, Università degli Studi di Torino)*

The symposium aims to provide an examination of the construct of emotional dysregulation in psychopathology - with a focus on mental rumination - and in the context of assessment and psychotherapy. Andò et al. discuss the results of their recent systematic review aimed at shedding light on the relationship between rumination and psychopathology, focusing on the updated HiTOP approach. Rusconi presents an experimental study of perseverative cognition associated with an increase in health risk behaviors such as cigarette smoking, primarily due to rumination and/or deficits in reappraisal strategies. Vitolo and colleagues continue the symposium by reporting on a study of cognitive, affective, and neurobiological features associated with dispositional use of reappraisal in healthy subjects. Vetere & Brusadelli present a study of emotion regulation and coping abilities in response to the daily stressors; the authors examined the Picture Frustration Study adaptation in combination with Criterion A of the AMPD. Finally, Kleinbub et al. present a study of evidence for associations between specific therapeutic processes and physiological regulation: skin conductance signals were acquired from 2 patient-therapist dyads involved in 16 sessions of brief psychotherapy.



## HOW DOES THE HITOP FRAMEWORK SHED LIGHT ON THE RELATIONSHIP BETWEEN RUMINATION AND PSYCHOPATHOLOGY? A SYSTEMATIC REVIEW

*Agata Andò (Dipartimento di Psicologia, Università degli Studi di Torino), Sarah Chantal Miconi (Università degli Studi di Torino), Enrico Vitolo (Università degli Studi di Torino), Lorenzo Brienza (Università degli Studi di Torino)*

Mental rumination is a complex and multifaceted construct that refers to an abstract, persistent, and intrusive thought process that focuses on one's negative emotions and experiences of failure. Rumination is thought to be a proximal factor that predisposes to psychopathology and has transdiagnostic value. For the present work, the Hierarchical Taxonomy of Psychopathology (HiTOP) nosographic framework was used to analyze and discuss the results. This review aims to shed light on the relationship between rumination and psychopathology, as informed by the HiTOP and pointing to accessible interventions. The systematic review was conducted according to PRISMA statements. Pubmed and PyschInfo were used for the literature research since the publication of the HiTOP model (2017). Two hundred twenty-four studies were identified from 902 studies reviewed. One hundred sixty-one met the inclusion criteria. Rumination maintains its transdiagnostic value distributing itself along all superspectra and autism, and particular associations are observed between spectra, treatments, and rumination constructs. Wide variability in construct definitions or in the assessment that affects the compare, analysis, and generalizability of results.

## SMOKERS AND NON-SMOKERS' ATTEMPTED THOUGHT SUPPRESSION: THE ROLES OF RUMINATION TRAIT AND EMOTION REGULATION

*Patrice Rusconi (Università degli Studi di Messina)*

The effect known in the literature as the white bear effect refers to a person's attempt to suppress thoughts, which can lead to the ironic effect of not being able to suppress them completely, and even to a rebound effect. In the present study, a modified version of the original experimental paradigm was used to investigate the role of the rumination trait and emotion regulation following stressful feedback in smokers and non-smokers' attempts to suppress smoking-related (i.e., a cigarette) vs. neutral (i.e., a white bear) thoughts, respectively. Also, in this study, which included non-clinical subjects, failures to suppress thought content were interpreted as an index of intrusive (ruminative) aspects. Our results showed that smokers ( $N = 40$ ) exhibited higher levels of difficulties in emotion regulation compared with non-smokers ( $N = 39$ ). Furthermore, non-smokers exhibited more efficient emotion regulation in terms of reappraisal compared with smokers. Finally, compared to smokers, non-smokers showed a trend, although not statistically significant, toward reduction in failure to suppress the thought of a white bear after stressful feedback ( $p = .073$ ) and they reported fewer failures to suppress the thought of a cigarette following the induced stress ( $p \leq .001$ ).

## EMOTION REGULATION PROCESSES: AN INTEGRATIVE INVESTIGATION OF COGNITIVE, AFFECTIVE, AND NEUROBIOLOGICAL FEATURES

*Enrico Vitolo (Università degli Studi di Torino), Matteo Diano (Università degli Studi di Torino), Claudia Pignolo (Università degli Studi di Torino), Alessandro Zennaro (Università degli Studi di Torino)*

Emotion dysregulation (ED) is prominent in several mental disorders. The dispositional use of adaptive emotion regulation (ER) strategies, such as cognitive reappraisal (CR), is usually associated to better psychological outcomes and less emotional problems. Thus, identifying markers of ED could serve as a key point for developing treatments against risks of psychopathology. We examined cognitive, affective, and neural patterns associated with dispositional use of CR among a non-clinical sample. We found that the dispositional use of CR was associated with decreased levels of ED and heightened expression of negative affectivity. Difficulties in using CR were associated with decreased resting-state functional connectivity (rs-FC) between the Middle-Temporal Gyrus and occipito-parietal regions. Moreover, rs-FC between prefrontal and occipito-parietal regions was negatively associated with both ED levels and expression of negative affectivity. Structural anomalies across temporal, parietal, and occipital white matter tracts were linked to difficulties in using CR. Our findings suggest that specific cognitive, affective, and neurobiological features are linked to reappraising skills. Moreover, the ability to implement adaptive ER strategies could serve as protective factor against ED

## A PERFORMANCE-BASED TEST ON INTERPERSONAL SKILLS: AN ADAPTATION OF THE PICTURE FRUSTRATION STUDY COHERENT WITH CRITERION A OF THE AMPD

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The Picture Frustration Study (PFS) is an old test of 24 cartoon pictures showing two people in frustrating situations. In this new adaptation of the test, stimuli are used to highlight interpersonal and emotional patterns in response to these sorts of daily stresses. Responses are coded by assessing the two coordinates of Communion and Agency on a four-quadrant graph. The test also provides an evaluation of the severity (based on Criterion A) of the responses provided. The aim of the research was to evaluate the validity of this new coding system and its clinical utility. A total of 120 clinical individuals were collected. The battery included the PFS and self-reports measuring AMPD Criterion A and B. Preliminary results demonstrated excellent interrater reliability, showing its ease of administration (10/15 mins) and coding, which can directly involve the patient also during the scoring phase. Overall, data suggest PFS can be a promising instrument in the assessment of interpersonal functioning, with a strong utility of it in the collaborative assessment panorama. A video will show how the test allows the client to increase his level of mentalization on his interpersonal functioning and regulate his emotional responses.

## INTERPERSONAL PHYSIOLOGY AND THE THERAPEUTIC COLLABORATION CODING SYSTEM: AN ANALYSIS ON THE ROLE OF PROXIMAL DEVELOPMENT ZONE

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Growing literature is reporting correlations between physiological synchrony and therapy processes. Yet understanding of the underlying mechanisms remains speculative. We acquired skin-conductance from two 16-sessions brief psychotherapies. Moment-by-moment skin-conductance synchronization (AMICo algorithm) was calculated for each session. Transcripts and videos were coded through the Therapeutic Collaboration Coding System (TCCS) assessing whether specific therapeutic interventions fall within the patient's Therapeutic Zone of Proximal Development, leading to validating or invalidating responses. We calculated median synchronizations within each patient-therapist exchange. For each TCCS category permutation tests were performed to control for pseudo-synchrony. Preliminary results showed higher levels of synchrony in ambivalence exchanges, characterized by fluctuations in patients' acceptance of the perspective proposed by the therapist, and mixed signs of validation and invalidation. Furthermore, patients were temporally leading the physiological regulation, in contrast with more common dynamics. Results show support for the use of physiological synchronization in the study of specific therapy mechanisms and may pave the way for causal study designs in psychotherapy.

# PSYCHOLOGICAL IMPACT IN CHRONIC DISEASE: HEALTH CARE BEHAVIORS AND WELL-BEING OVER TIME

*Proponente: Jessica Ranieri (Dipartimento di Medicina Clinica, Sanità Pubblica, Scienze della Vita e dell'Ambiente, Università degli Studi dell'Aquila)*

The prevalence of chronic diseases (CDs) is rising rapidly and place a burden on individuals and healthcare systems. CD patients are exposed to many psychological challenges due to long-term treatment and medical surveillance. Yet challenges still exist in the recognition and management of the psychological dimensions of these conditions frequently overlooked when medical care is considered. Furthermore, in literature most of health measurements evaluate the life expectancy. Nevertheless, examined Quality of Life variables could be a generic disease focused evaluation. Clinical practice highlighted the lack of decision-making patient-approach comprising individual features. More factors should be considered to improve the health awareness tailored on disease toward to better patient survivorship adaptation. Present symposium wanted to examine the relationship between individual factors of patients dealing with CD. The symposium was focused to evaluating the behavioral and psychological management of CD comparing different diseases providing diverse side-effects, such as cancer, diabetes, cardiovascular, kidney and other diseases, analyzing the self-care ability, coping strategies, cognitive reserve, defensive patterns, personality traits and emotional dimensions.

## COGNITIVE RESERVE INDEX IN ESRD PATIENTS: A NEW PARADIGM FOR PERSONALIZED MEDICINE IN CLINICAL PATHWAY

*Federica Guerra (Dipartimento di Medicina Clinica, Sanità Pubblica, Scienze della Vita e dell'Ambiente, Università degli Studi dell'Aquila)*

End Stage Renal Disease (ESRD) is the last stage of Chronic Kidney Disease (CKD) with high prevalence of psychological concerns. Aim of our study was to analyze the role of the cognitive reserve as predictive factor for the mental adaption in CKD patients. We recruited 103 ESRD patients during hemodialysis treatment (HD) (43F,56M) aged 22-79 years ( $M=54.4;SD\pm 11.3$ ). Psychological battery was composed of standardized tests measuring emotional traits (depression, anxiety, stress, and psychological distress) and Cognitive reserve index variables. We conducted descriptive statistical analyses and performed a hierarchical regression analysis to investigate the relationship between cognitive reserve index and psychological dimensions. The results showed the predictive effect of CRI level on emotional outcome ( $R^2=0.838; p<0.001$ ). Our finding highlighted the good influence of cognitive reserve index in the psychological adaptation to the own health condition. Personalized intervention could be applied in clinical pathway based on cognitive reserve level

## CLINICAL PSYCHOLOGICAL FIGURES IN TYPE 1 DIABETES: TYPICAL PHENOMENA AND POSSIBLE DIRECTIONS

*Emanuele Maria Merlo (Università degli Studi di Messina)*

Chronic diseases produce a consistent impact in the life of individuals, affecting several domains such as psychological functioning. At a first level it is possible to identify behavioural phenomena typically linked to the onset of pathology, as in the case of mismanagement, compliance and adherence violations. Through a comprehensive review of the literature, it is possible to highlight how subjects neglecting pathology behave in contrast with clear indications, suffering from damages most of the times irreparable (e.g., related neuropathies). The study of psychological functioning of subjects affected by type 1 diabetes appears to be particularly interesting. Beyond classical and well-known phenomena as illness denial and immature mentalization, relevant clinical psychological figures appear to be a key to understanding possible leverage points. As a limitation classically emerged with reference to scientific literature, it is usually neglected how to structure interventions on the basis of evident maladjustment and specifically affected domains. The present contribution is aimed at highlighting typically occurring phenomena in subjects affected by type 1 diabetes, considering the role of emotional management and its affections supported by maladaptive defensive patterns.



## EMOTIONAL IMPACT OF CHRONIC DISEASES: PSYCHOLOGICAL, PERSONALITY AND SELF-CARE BEHAVIOR TOWARDS THE SURVIVORSHIP ADAPTATION PROCESS

*Jessica Ranieri (Dipartimento di Medicina Clinica, Sanità Pubblica, Scienze della Vita e dell'Ambiente, Università degli Studi dell'Aquila), Federica Guerra (Dipartimento di Medicina Clinica, Sanità Pubblica, Scienze della Vita e dell'Ambiente, Università degli Studi dell'Aquila), Eleonora Cilli (Dipartimento di Medicina Clinica, Sanità Pubblica, Scienze della Vita e dell'Ambiente, Università degli Studi dell'Aquila), Dina Di Giacomo (Dipartimento di Medicina Clinica, Sanità Pubblica, Scienze della Vita e dell'Ambiente, Università degli Studi dell'Aquila)*

The prevalence of Chronic Disease (CD) is rising rapidly due to advances in clinical treatments. Lifelong treatment is crucial for managing CD and, yet the emotional cost is frequently overlooked. Aim of our study was to identify predictive psychological factors of survivorship adaptation to CD. The participants were 316 CD patients (170 F, 146 M) aged 18–75 y (M 53.4 y, SD±12.8): Cardiovascular (CV, n.76); Genitourinary (GU, n.53); Endocrine and Metabolic (EM, n.77); Gastroenterological (GE, n.37); Musculoskeletal and connective tissue (M, n.39) diseases; Cancer (CA, n.32). The psychological battery was applied: BFI-10, SC-CII, DASS-21. The sample showed moderate Anxiety, low Self-Care Maintenance, Monitoring, Management. Statistical analysis showed lower Monitoring ( $p=0.02$ ) in EM, lower Self-Efficacy ( $p=0.01$ ) in M, higher Stress ( $p=0.04$ ) in M. Pearson's correlations emerged between Stress and Self-Efficacy ( $r=-0.12$ ,  $p=0.02$ ); Consciousness and Depression ( $r=-0.13$ ,  $p=0.02$ ); Consciousness and Maintenance ( $r=0.12$ ,  $p=0.02$ ); Openness and Maintenance ( $r=0.11$ ,  $p=0.04$ ), Monitoring ( $r=0.12$ ,  $p=0.02$ ), Self-Care Tot ( $r=0.12$ ,  $p=0.03$ ). Clinical psychologists could apply personalized intervention by modeling the treatments on diagnosis and personality helping patients to adapt to a new life.

## INVESTIGATION OF PSYCHOLOGICAL FACTORS ASSOCIATED WITH THE EXPERIENCE OF BREAST CANCER SURGERY: A FOCUS ON COPING STRATEGIES

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The adoption of coping strategies may significantly modulate the experience of surgery in women with breast cancer (CM). This study aims to investigate variations in pre-/post-surgery distress in women with CM, and whether and how coping strategies may predict the level of post-surgery distress. 150 patients scheduled for breast cancer surgery were recruited. The Distress Thermometer (DT) was administered pre- and post-surgery. The Brief-COPE was also administered in pre-surgery to assess coping strategies. Changes in distress were analyzed through T-tests, and a principal component analysis (PCA) based on Brief-COPE scores was performed. These principal components entered a linear regression to predict post-surgery DT scores. Post-surgery distress was significantly lower than pre-surgery. PCA revealed four components. Amongst them, support provision and goal-oriented detachment significantly predicted post-surgery distress scores (all  $p < 0.05$ ). Findings demonstrate the predictive role of coping strategies in CM experience, and suggest the importance of implementing interventions aimed at enhancing protective psychological skills.

## EXPLORING THE LONG-TERM EFFECTS ON MENTAL HEALTH OF A TRAUMATIC DIAGNOSIS OF PARKINSON'S DISEASE

*Federico Zorzi (Università degli Studi di Sassari), Clara Casu (Università degli Studi di Sassari)*

Parkinson's Disease (PD) is a complex chronic illness that affects the patients physically, psychologically and socially. Thus, acknowledging the diagnosis of PD is a burdensome process, that might also be traumatic to some patients. Trauma can alter the physiological, emotional and cognitive processing of the situation and lead to complex psychiatric conditions, even long after the event. The goal of this preliminary research is to verify the hypothesis that a traumatic experience of the PD diagnosis can contribute to more severe psychiatric conditions in the long-term. A sample of 15 PD patients filled in the Impact of Events Scale (IES-R) to assess the subjective experience of the diagnosis, and the Symptoms Checklist 90 (SCL90-R) to evaluate the current psychiatric conditions. Most of the subjects (80%) resulted above the PTSD cutoff of the IES, and 46.7% of the SCL90-R GSI scores were above the clinical cutoff. The results of the linear regression analysis showed that the IES-R Total scores predict approximately 62% ( $R^2 = .627$ ) of the SCL90-R GSI scores, supporting the main hypothesis of the research.

# PSYCHOLOGICAL WELLBEING OF HEALTHCARE PROFESSIONALS: CHALLENGES AND RESOURCES

*Proponente: Giulia Lamiani (Università degli Studi di Milano Statale)*

Psychological wellbeing of healthcare professionals (HPs) received increased attention during the COVID-19 pandemic. However, the importance of sustaining HPs' psychological wellbeing has been largely acknowledged in the literature also before COVID-19. This symposium aims to explore the different forms of psychological suffering that HPs may experience and highlight possible resources. The different contributions, while describing the psychological distress observed in different settings, will also highlight the protective factors associated to wellbeing. A first contribution by Busch et al, will report the emotional impact and coping strategies used by HPs involved in adverse events. A second contribution by Lamiani et al will describe the organizational and individual factors associated with moral distress among pediatric critical care HPs. A third contribution by Meneghini et al will explore the relationship between emotion regulation strategies and burnout among nurses and first-aid volunteers. A fourth contribution by Perego et al will describe longitudinal data on psychological distress of HPs during COVID-19 pandemic. The results of these contributions will shed light on critical aspects of HPs' mental health and on the resources to foster to promote wellbeing.

## EMOTIONAL IMPACT AND COPING STRATEGIES IN HEALTHCARE PROVIDERS INVOLVED IN ADVERSE EVENTS: PRELIMINARY RESULTS OF THE ONGOING VALIDATION STUDY OF THE WITHSTAND-PSY QUESTIONNAIRE (WS-PSYQ)

*Isolde Martina Busch (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Maria Angela Mazzi (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Francesca Moretti (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Loretta Berti (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona), Anna De Santi (Dipartimento di Neuroscienze, Istituto Superiore di Sanità), Albert W Wu (Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, USA), Michela Rimondini (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona)*

The second victim (SV) phenomenon represents a particular experience which cannot be fully captured by existing instruments. Thus, we are currently validating the WITHSTAND-psy Questionnaire (WS-PSYQ) measuring both SVs' psychological distress prior to and after the event and coping strategies. In the first, already completed phase, we examined content validity using cognitive interviews. In the second, current phase, we are assessing reliability and diagnostic accuracy by additionally administering the BDI-II and STAI-Y, serving as gold standards (projected sample size: n=300). Preliminary descriptive analyses based on a sample of 264 participants (213 women, 51 men) were performed using Stata 17. The findings showed that 51.14% of SVs were involved in an COVID-19 related event and only 33.71% worked in a supportive culture. More than a third of SVs (37.12%) showed depressive symptoms (mild, moderate, or severe) and more than half (56.76%) anxiety (light, moderate, or severe). SVs applied adaptive and maladaptive task-, emotion-, and avoidance-oriented coping, with adaptive task-oriented strategies showing the highest mean score (2.43, range scale 1:4). Ultimate validation analyses will examine if the WS-PSYQ is a psychometrically strong screening instrument for SVs' distress.

## MORAL DISTRESS IN THE ITALIAN PEDIATRIC INTENSIVE CARE UNITS: THE ROLE OF INDIVIDUAL AND ORGANIZATIONAL FACTORS

*Giulia Lamiani (Università degli Studi di Milano Statale), Lidia Borghi (Università degli Studi di Milano Statale), Luca Barlascini (ASST Santi Paolo e Carlo Milano), Alberto Giannini (ASST Spedali Civili di Brescia)*

This study aimed to assess the impact of individual and organizational factors on moral distress (MD) in Pediatric Intensive Care Units (PICUs). A paper-based survey was administered between June and August 2017 in 23 Italian PICUs. Clinicians completed the Italian Moral Distress Scale-Revised, the Connor-Davidson Resilience Scale and a sociodemographic questionnaire. PICU organizational characteristics were also collected. Of 874 clinicians, 612 correctly completed the survey (74% female; 66% nurses and 34% physicians). To identify individual predictors of MD, we used stepwise linear regression. To determine the impact of organizational factors on MD we used analysis of covariance, controlling for those individual factors that emerged as significant in the regression model. Predictors of MD were being a nurse ( $B = -.094$ ;  $p < .05$ ) and not having spiritual/religious belief ( $B = .130$ ;  $p < .01$ ), but not resilience. Clinicians working in PICUs with a medium number of admissions per year (between 264 and 468), a lower nurse:patient ratio (1:3) and where parent presence during medical visits was never allowed, experienced higher MD even controlling for profession and spiritual/religious belief. Organizational factors played a stronger role than individual factors in increasing MD.

## EMOTION REGULATION REPERTOIRES AND BURNOUT IN HEALTHCARE PROFESSIONALS

*Anna Maria Meneghini (Dipartimento di Scienze Umane, Università di Verona), Daiana Colledani (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Sofia Morandini (Dipartimento di Scienze Umane, Università di Verona)*

Studies on emotion regulation (ER) strategies have shown that flexibility in choosing them to regulate negative emotions and extensive repertoires of these strategies can be a protective factor for burnout. Firstly, a CFA was run to test the suitability of the 24-item Italian version of the Regulation of Emotion System Survey for the assessment of six ER strategies among healthcare providers (212 nurses, 250 first responders). Latent profile analysis was employed to explore ER repertoires. Three repertoires emerged: Average, Suppression Propensity and Engagement Propensity. Individuals characterized by the last two, tend to rely mainly on Expressive Suppression and Engagement, respectively. Lastly, the Maslach Burnout Inventory (MBI) was used to assess participants' levels of burnout. Differences in Emotional Exhaustion, Depersonalisation and Personal Accomplishment between the repertoires were explored through one-way ANOVAs. The results suggest that the professionals characterized by the Engagement Propensity profile tend to experience greater exhaustion compared with those of the other two groups (Average and Suppression Propensity). Moreover, they tend to experience greater Depersonalisation compared with the professionals characterized by the Average repertoire.

## RISK AND PROTECTIVE FACTORS FOR HEALTHCARE WORKERS' MENTAL HEALTH: A FOCUS ON THE FIRST SIX MONTHS OF THE PANDEMIC

*Gaia Perego (Università degli Studi di Milano-Bicocca), Francesca Milano (Università degli Studi di Perugia), Martina Mazzetti (), Valentina Di Mattei (Università Vita-Salute San Raffaele Milano)*

The pandemic forced frontline healthcare workers around the world to work in unprecedented and critical circumstances for nearly two years, exacerbating already problematic and stressful working conditions. We conducted a longitudinal study that examined the experiences of healthcare workers at three moments in time (after the main peak of the COVID-19 outbreak in Italy, during the second wave, and after the third wave). Here, we present findings from the second phase of the study (5-30 December 2020), aimed at identifying psychological and personal factors influencing individuals' responses to the COVID-19 pandemic. 291 healthcare workers took part to the survey by answering an online questionnaire and completing questions on socio-demographic and work-related information, and on perceived social support, coping strategies, feelings of anger, depression, anxiety, stress, insomnia, burnout, and PTSD symptoms. Our results show that higher levels of worry, worse working conditions, a previous history of psychiatric illness, being a nurse, older age, and avoidant and emotion-focused coping strategies seem to be risk factors for healthcare workers' mental health. Identifying protective and risk factors could be helpful to implement targeted interventions for healthcare workers.



## SEXUAL AND GENDER MINORITIES: FROM COUPLE TO PARENTHOOD

*Proponente: Alessandra Santona (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca),  
Luca Rollè (Dipartimento di Psicologia, Università degli Studi di Torino)*

Gender-based violence and structural violence due to sexual stigma impact lives of both women and sexual and gender minorities, their social and romantic relationships as well as transition to parenthood. The panel discuss factors involved in the wellbeing of these populations, focusing on couple, childbirth and parenthood. The contribution of Isolani et al. assessed factors associated to social support in same-sex couples, promoting the understanding of variables which can impact on isolation and marginalization of sexual minorities. The work of Trombetta et al. explored the role of romantic attachment and emotional regulation onSSIPV perpetration, providing information at a clinical level useful to address a phenomenon still poorly explored. The contribution of Lampis et al. is focused on desire and intentions to have a child among trans\* people; the results showed that a considerable number of trans\* people want to become parents and the need to reflect on the reproductive implications of the gender-affirming process. The work of Scandurra et al. explored types and prevalence of Obstetrical Violence and associated sociodemographic factors, finding that 78.4% of the women have experienced it which impact mental health and need to be addressed with a multidimensional approach.

## UNDERSTANDING AND RESOLVING COUPLE CONFLICT FROM A CONTROL-MASTERY THEORY PERSPECTIVE: AN EMPIRICAL STUDY

*Eleonora Fiorenza (Sapienza Università di Roma)*

Control-Mastery Theory highlights that people can exercise some control over unconscious mental functioning and are motivated to master conflicts. CMT model can be also applied to couples' settings. This research aims to verify on the basis of verbatim transcripts of the sessions, the systematic relationship between the presence of couple conflict and the presence of vicious circles, i.e. tests implemented by the partners and mutually failed. The goals are empirically assess the presence of a systematic relationship between the couples moments of conflictual interaction and failure to pass each others tests, observe which Interpersonal Motivational Systems and Interpersonal Guilt are activated during couple conflicts. The sample is 15 couples and 11 experienced psychodynamic therapists. The tools are Plan Formulation Method for Couples, the AIM-IT and the Interpersonal Guilt Rating Scale-15. The steps are formulation of the Couples Plan, identification of conflict interactions, patient test rating scale, assessment of Interpersonal Motivational Systems and prevailing guilt. We expect the presence of higher ratings of the couple tests, greater activation of Status and Attachment systems and interpersonal guilt in the segments rated as conflict than in the neutral segments.

## UNITY IS STRENGTH: DYADIC ADJUSTMENT AS A PROTECTIVE FACTOR FOR SOCIAL SUPPORT AGAINST MINORITY STRESSORS IN SAME-SEX COUPLES

*Stefano Isolani (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma),  
Chiara Antonucci (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma)*

Research has highlighted the relevance of investigating perceived social support (PSS) in sexual minorities because they are at risk of isolation, marginalization, and additional specific stressors related to their minority status. The present work aims to analyze the role of dyadic adjustment as a protective factor for PSS against minority stressors in a sample of Italian lesbian, gay, and bisexual (LGB) people involved in a relationship with a same-sex partner. We reached 242 participants (50% bisexual; 57% females) aged from 18 and 58 years ( $M=28.75$ ;  $DS=7.44$ ). A hierarchical analysis has been conducted to assess the influence of minority stressors and dyadic adjustment on PSS. Hierarchical regression results were significant ( $R^2=.29$ ,  $F=7.75$ ,  $p<.001$ ): Internalized sexual stigma ( $\beta=-.27$ ,  $t=-4.71$ ,  $p<.001$ ), coming out ( $\beta=.29$ ,  $t=4.33$ ,  $p<.001$ ), received discrimination ( $\beta=-.16$ ,  $t=-2.22$ ,  $p<.05$ ) and dyadic adjustment ( $\beta=.14$ ,  $t=2.40$ ,  $p<.05$ ) seems to significantly impact on PSS. Analyses confirmed dyadic adjustments role as a protective factor for PSS against minority stressors. It is pivotal to extend our knowledge about sexual minorities to understand better how individuals and dyadic dimensions contribute to LGB peoples well-being.

## TRANSPARENTING: DESIRE AND INTENTIONS TO HAVE A CHILD AMONG TRANS\* INDIVIDUALS IN ITALY

*Jessica Lampis (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Francesco Serri (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Silvia De Simone (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Giulia Curridori (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari)*

Family creation, or the process of becoming a parent, can be a natural part of trans\* individuals' life (APA, 2015) but the cultural, social and institutional barriers trans\* individuals have to face could play a crucial role on their desires and intentions on having children. This study moves from an intersectionality perspective that focused on trans\* and parenting identities and explores parenting desires and intentions among a sample of trans\* individuals. 105 trans\* Italian individuals carried out a research protocol composed by closed and open items evaluating their desire and intentions to have children. Narratives and factors associated to these variables was explored through a qualitative analysis. Findings revealed that the 64% of participants expressed the desire and the 53% expressed the intention to have a child. The motivations associated with these choices are not very different of those expressed by the cisgender population. This study revealed that despite the persisting depth of heteronormativity and cisnormativity in Italy, there are a considerable number of trans\* individuals who want to become parents in the future, therefore it is necessary to reflect on the reproductive implications of the gender-affirming process and the pathways to parenting.

## OBSTETRIC VIOLENCE IN ITALY: SOCIO-DEMOGRAPHIC PREDICTORS AND EFFECTS ON MENTAL HEALTH

*Cristiano Scandurra (Dipartimento di Neuroscienze e Scienze Riproduttive ed Odontostomatologiche, Università degli Studi di Napoli Federico II - Gruppo sulle Diversità e Disparità dei Generi (GDG) dell'Associazione Italiana di Psicologia), Rosanna Zapparella (Dipartimento di Neuroscienze e Scienze Riproduttive ed Odontostomatologiche, Università degli Studi di Napoli Federico II), Mariavittoria Locci (Dipartimento di Neuroscienze e Scienze Riproduttive ed Odontostomatologiche, Università degli Studi di Napoli Federico II), Nelson Mauro Maldonato (Dipartimento di Neuroscienze e Scienze Riproduttive ed Odontostomatologiche, Università degli Studi di Napoli Federico II)*

Over the last decade, the disrespect and abuse experienced by women during childbirth has received growing scientific and political attention. This phenomenon is referred to as obstetric violence (OV) and has recently been characterized as a form of gender-based violence. This study examined the types and prevalence of OV, as well as related sociodemographic factors and associations with mental health. An online cross-sectional study was conducted with 282 Italian women. Multiple linear regression analyses were performed to assess the predictive role of socio-demographic and childbirth characteristics on OV, as well as the predictive role of OV on mental health. 78.4% of the sample had experienced at least one type of OV (55.5% of non-consented care and 66.4% of abuse and violence). The factors most strongly associated with OV were younger age, low education level, not attending a prenatal childbirth preparedness course, and natural childbirth. The form of OV that most affected mental health was that linked to abuse and violence rather than non-consented care. This study sheds light on the need to address OV from a multidimensional approach, incorporating legal, organisational, and research perspectives.

## THE ROLE OF ROMANTIC ATTACHMENT AND EMOTIONAL REGULATION IN CONTROLLING SAME-SEX INTIMATE PARTNER VIOLENCE PERPETRATION: A MEDIATIONAL MODEL

*Tommaso Trombetta (Dipartimento di Psicologia, Università degli Studi di Torino), Alessandra Santona (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Luca Rollè (Dipartimento di Psicologia, Università degli Studi di Torino), Fabrizio Santoniccolo (Dipartimento di Psicologia, Università degli Studi di Torino), Giacomo Tognasso (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

Same-Sex Intimate Partner Violence (SSIPV) received little attention until few decades ago, despite alarming results on its spreading. While the role of romantic attachment in SSIPV perpetration has been widely recognized, the mechanisms which mediate this association need further exploration, particularly among lesbian and gay (LG) people. The current study will explore the association between romantic attachment and controlling SSIPV perpetration, assessing the mediational role of emotional regulation. A cross-sectional study was conducted with 130 LG people. Mediational analyses were applied to assess the association between romantic attachment, emotional regulation and controlling SSIPV perpetration. The results partially confirmed our hypotheses, highlighting a relation between both attachment anxiety and avoidance, and controlling SSIPV perpetration. However, only the association between attachment avoidance and controlling SSIPV was partially mediated by emotional regulation. Drawing from attachment theory, this study sheds light on the mechanisms which contribute to the perpetration of couple violence among LG people, providing valuable information at a clinical level.

## **SLEEP FUNCTION AND AFFECTIVE RESPONSE TO STRESS: CURRENT QUESTIONS AND NEW DIRECTIONS**

*Proponente: Christian Franceschini (Dipartimento di Medicina e Chirurgia, Università di Parma),  
Alessandro Musetti (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università  
di Parma)*

Sleep plays an important role for physical, mental, and emotional health, however its underlying affective processes are still not well understood. Poor sleep quality and insufficient sleep have negative effects on psychological well-being and are linked to affective disorders, such as anxiety and depression, as well as a reduced ability to effectively regulate emotions. In addition, sleep also plays a key role in stress management, as recent studies on COVID-19-related stress have shown. The purpose of the symposium is to discuss and present recent evidence about the relationship between sleep, negative affect and stress and emotion regulation strategies. The 1st contribution by Moretta et al. examines the associations between loneliness and problematic networking sites use in good vs poor sleepers. The 2nd contribution by Varallo et al. investigates the relationship between binge watching, loneliness, emotion regulation in subjects with poor sleep quality. The 3rd contribution by Terrone et al. adopted a network analysis approach to investigate the association between emotion regulation, depression, anxiety, and daytime sleepiness during COVID-19. Finally, Margherita et al. present a systematic review that assessed the effects of pandemic COVID-19-related stress on dreaming.

## GENDER DIFFERENCES IN LONELINESS AND PROBLEMATIC SOCIAL NETWORKING SITES USE OF YOUNG ADULTS WITH POOR VS. GOOD SLEEP QUALITY

*Tania Moretta (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Alessandro Musetti (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma)*

Gender differences in the relations between sleep quality, loneliness, and problematic social networking sites use (PSNSU) have yet to be understood. We examined relations between loneliness and PSNSU domains (i.e., preference for online social interaction – POSI, mood regulation, deficient self-regulation, and negative outcomes), and possible moderating effects of gender for individuals with poor vs. good sleep quality. Seven hundred and sixty-three young adults completed a survey including self-report measures of sleep quality, loneliness, and PSNSU. Individuals with poor sleep quality reported higher levels of loneliness and greater scores on all PSNSU domains relative to those with good sleep quality. Slope analyses revealed that in males vs. females with poor sleep quality, greater deficient self-regulation of social networking sites use was associated with lower levels of loneliness. Conversely, in males vs. females with good sleep quality, greater POSI was associated with higher levels of loneliness. Our findings highlight gender differences for individuals with poor vs. good sleep quality that help to clarify the nature of the association between loneliness and PSNSU.



## PROBLEMATIC BINGE WATCHING IN POOR SLEEPERS

*Giorgia Varallo (Università di Parma), Christian Franceschini (Dipartimento di Medicina e Chirurgia, Università di Parma), Maria Filosa (Università di Parma)*

Evidence shows that problematic binge watching can have negative psychosocial and health consequences, such as increased anxiety, depressive symptoms, feeling of loneliness, isolation, and poor sleep quality. It has been suggested that problematic binge watching might be an emotion regulation strategy used to cope with aversive emotions. Loneliness has been specifically identified as a key factor associated with problematic binge watching. Sleep is an aspect that has been overlooked in research but could be associated with and contribute to problematic binge watching. Indeed, poor sleep quality is associated with feelings of loneliness and emotional dysregulation. As a result, people with poor sleep quality may experience both feelings of loneliness and emotional dysregulation, which may lead to increased binge watching. Importantly, screen exposure during binge watching may have a negative impact on sleep, creating a vicious cycle with negative effects on both aspects. Thus, the aim of our study was to assess the difference between poor sleepers and good sleepers in binge watching, evaluate the association between loneliness, emotion dysregulation, sleep related factors, and problematic binge watching in poor sleepers.

## EXCESSIVE DAYTIME SLEEPINESS, NEGATIVE AFFECT AND EMOTION REGULATION DURING THE COVID-19 PANDEMIC: A NETWORK ANALYSIS APPROACH

*Grazia Terrone (Dipartimento di Storia, Patrimonio culturale, Formazione e Società, Università degli Studi di Roma, Tor Vergata), Mirian Agus (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari)*

The COVID-19 pandemic has affected individual lifestyles, such as sleep habits and psychological disturbances. In this study, a network analysis (NA) was applied to evaluate the relationships between negative affect, emotion dysregulation, and excessive daytime sleepiness (EDS) during the COVID-19 pandemic. We recruited 632 community adults (meanage  $31.01 \pm 10.83$  years), which underwent an online survey including the Depression Anxiety Stress Scale (DASS-21), the Difficulties in Emotion Regulation Scale (DERS), and the Epworth sleepiness scale (ESES). The NA was performed for modeling interactions and for depicting a visual representation of the compound links among negative affect, emotion dysregulation, and EDS during the pandemic. The most relevant nodes in the network referred to the DERS Strategy and to the DASS Depression score; these two nodes were considered the bridges of the network. The principal evidence of the NA denoted the link between negative affect and emotion dysregulation, precisely between depressive symptoms, difficulty in emotional clarity, and difficulty in the use of flexible emotional strategies. An accurate evaluation of these dimensions represents a real goal, which might be considered in order to implement tailored interventions.

## DREAMING AS AN INDICATOR OF PSYCHOLOGICAL HEALTH DURING THE PANDEMIC: A SYSTEMATIC REVIEW

*Giorgia Margherita (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II),  
Alessia Caffieri (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

During the pandemic, literature showed a great interest in dream-related phenomena and dreaming functions as a way to access the mental health of individuals, revealing a peculiar way of dreaming during the COVID-19 crisis. This study aims to systematically review existing studies about dreams and dreaming during the pandemic in accordance with PRISMA guidelines. From a total of 1267 papers, 83 articles met the inclusion criteria and were included in the review. Results show: 1) a more intense oneiric activity, associated with a higher psychological distress, especially during lockdowns than other phases of the pandemic; 2) changes in dreaming components: a) nightmare frequency; lucid-dream frequency; dream-recall; vividness; emotional tone, emotional intensity of dreams; b) a particular dreaming scenario with COVID-19-related elements; 3) the emergence of groups more affected by changes in dreaming (women, young adults, health care workers); 4) an alteration of the dreaming-waking-life continuum. Findings suggest that dreaming, such as sleeping, is an important source to access the psychological health of the general population and could also contribute to the debate on dreaming functions both during “collective trauma” periods and in everyday life.

## THE ROLE OF EMOTIONAL PROCESSING AND (DYS)REGULATION IN ADOLESCENCE: ISSUES IN COMMUNITY AND CLINICAL SAMPLES

*Proponenti: Daniela Di Riso (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Marina Miscioscia (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Emotional regulation (ER) is one of the a-theoretical factors accounted for maintenance of youth physical and mental health, both in clinical and in community samples. In adolescence, the ability to identify and integrate emotional information while simultaneously managing behaviors in accord with interpersonal (i.e., social) and intrapersonal (i.e., personal) goals is the essence of ER. The present symposium will aim to stimulate discussion through. Two contributions (Dr Locati and Dr Iannattone) will discuss the role of emotional processing and (dys)regulation in normative samples: the first speaker will highlight the association between emotional dysregulation, mentalization and epistemic trust, the second one will explore the link between emotional processing and intolerance of uncertainty. Two presentations (Dr Cristofanelli; Dr Miscioscia and Dr Di Riso) will examine the same construct in clinical samples. The first one will focus on the association between emotional (dys)regulation with dissociation and cognition in a sample of adolescent hosted in residential communities. The second one the association between emotional (dys)regulation, impulsivity and traumatic experience of attachment in severe adolescent psychopathology. Finally Dr Marchetti will hold the discussion.

## IS ATTACHMENT RELATED TO TEENAGERS' EMOTION REGULATION STRATEGIES AND ALEXITHYMIA DURING THE COVID-19 PANDEMIC

*Wanda Morganti (Dipartimento di Scienze della Formazione, Università di Genova), Stefania Muzi (Dipartimento di Scienze della Formazione, Università di Genova), Cecilia Serena Pace (Dipartimento di Scienze della Formazione, Università di Genova)*

Literature on adults shows that attachment patterns, especially dismissing and preoccupied ones, are related to maladaptive emotion regulation strategies - e.g. expressive suppression - and greater alexithymia. Both emotion regulation and alexithymia influence teenagers' psychosocial adjustment, but little is known about their relationships with attachment during adolescence. Therefore, this study investigated the relationships among these three constructs in community adolescents during the COVID-19 pandemic. One-hundred-one teenagers ( $M_{age} = 14.94$ ,  $SD = 1.64$ , 47% boys) were assessed in attachment through the Friends and Family Interview, in cognitive reappraisal and expressive suppression strategies with the Emotion Regulation Questionnaire for Children and Adolescents, and alexithymia through the Toronto Alexithymia Scale-20 items. Results show that dismissing and disorganized attachment patterns were related to higher use of the expressive suppression (all  $p < .046$ ), and attachment security was related and predicted 6% lower alexithymia ( $p = .012$ ). In conclusion, practitioners could support attachment security to improve teenagers' ability to identify and describe feelings, while more studies are needed to understand risk pathways connecting attachment to emotion regulation.

## WHICH COMES FIRST? EXPLORING THE LONGITUDINAL ASSOCIATION BETWEEN EMOTIONAL PROCESSING AND INTOLERANCE OF UNCERTAINTY IN A NONCLINICAL SAMPLE OF ITALIAN ADOLESCENTS

*Sara Iannattone (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Gioia Bottesi (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Marco Lauriola (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma)*

Intolerance of Uncertainty (IU) and Emotional Processing (EP) are well-known transdiagnostic factors for mental disorders. Teenagers are highly vulnerable to psychopathology, thus examining the longitudinal association between IU and EP in such a population may be clinically relevant. This three-wave longitudinal study explored how self-reported IU and EP influence each other over 6 months in a nonclinical group of Italian adolescents (N=457, age=11-18). Using a random intercept cross-lagged panel model, a positive association between IU and EP at the between-person level emerged, suggesting that adolescents high on IU across measurement waves chronically experienced more difficulties in EP. At the within-person level, positive cross-lagged coefficients connected IU to EP, indicating that teenagers' changes in their habitual EP score were predicted by corresponding shifts in IU at the previous time point; conversely, the cross-lagged coefficients from EP to IU were weaker and marginally or not significant, pinpointing that adolescents' deviations from their habitual IU level were less strongly predicted by corresponding shifts in EP at the previous wave. Overall, results suggest that changes in IU beliefs may promote a better emotion regulation, but not vice versa.

## MENTALIZATION AND EPISTEMIC TRUST AS A PROTECTIVE ROLE IN ADOLESCENCE: THE RELATIONSHIP WITH EMOTION DYSREGULATION AND PSYCHOPATHOLOGY

*Francesca Locati (Università degli Studi di Milano-Bicocca), Alberto Milesi (Università degli Studi di Milano-Bicocca), Laura Parolin (Università degli Studi di Milano-Bicocca)*

Mentalization is the ability to interpret one's behaviour and others behaviour as caused by intentional inner mental states. Epistemic trust (ET), defined as trust in the authenticity and personal relevance of interpersonally transmitted information, is associated with the social-cognitive process of mentalizing. Accurate mental representations of the self and others allow people to think about and cope with external and internal stressors. This study examined how mentalization and ET were recruited to regulate and cope with emotional distress and psychopathological diseases in non-clinical adolescents. Participants were 130 non-clinical adolescents aged between 12 and 18 y.o. Adolescents were assessed with the Reflective Functioning Questionnaire for Youth, Epistemic Trust Mistrust Credulity Questionnaire, Difficulties in Emotion Regulation Scale and Youth Self Report. Correlation and mediation analysis showed that both ET and mentalization were negatively associated with emotion dysregulation and clinical problems. In addition, ET was linked with mentalization. In conclusion, ET and mentalization contrast emotional dysregulation. However, robust levels of epistemic trust and mentalization may have acted as protective factors that buffered psychopathology risk.

## EMOTION DYSREGULATION, DISSOCIATION AND COGNITION IN ADOLESCENCE: AN EMPIRICAL STUDY

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Emotion dysregulation is one of the main psychological construct involved in psychopathology. In our research we investigate emotion dysregulation in relationship with dissociation and cognition. Literature suggests an influence between these three functions: emotional regulation affects cognition, dissociation alters cognitive processes and emotion dysregulation induces dissociation. Nevertheless, there are no studies that investigate their relationship in a single model. Based on these data, we test a mediation model that adopts emotion dysregulation as independent variable, intelligence as dependent variable and dissociation as mediator. The aim is exploring if emotional dysregulation produces increased levels of dissociation that leads to an impairment in cognitive abilities. The sample is composed by 64 participants (10 – 19 years old): 31 adolescents as part of the clinical group and 33 of the non-clinical group. Both groups are administered with DERS, A-DES and Wechsler Scales. Contrarily to the hypothesis, data analysis highlights significant results for the control group only. We hypothesize that healthy adolescents adopt a non-pathological dissociative cognitive style in response to an increased emotion dysregulation that enhances cognitive performances.



## ATTACHMENT, AFFECT DYSREGULATION AND ALEXITHYMIA: A PILOT STUDY ON ADOLESCENTS WITH PSYCHOPATHOLOGICAL DISORDERS

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Several longitudinal studies have confirmed that insecure attachment is a significant risk factor for developing psychopathological disorders. Literature shows how affective regulation deficits mediate the relationship between attachment style and psychopathology. Impulsivity and alexithymia represent key aspects in regulating emotions. The main objective was to observe attachment patterns by evaluating them in the relationship between alexithymia and emotional impulsivity/dysregulation. This study applied a recruitment of two clinical groups (a-adolescents with self-injury; b-adolescents with eating disorders). Thirty adolescents aged 14-18 y were recruited from three Neuropsychiatric Units in Veneto. The Adult Attachment Projective System (AAP) detected a presence of insecure attachment in both clinical groups, particularly of unsolved/disorganized type. A positive association emerges between the traumatic segregated systems and impulsiveness. The present study support evidence on complex relational systems that characterize specific clinical samples, with particular attention to the traumatic aspects, resources (resilience) and defensive processes activated (vulnerability).

# PROBLEMATIC SOCIAL MEDIA USE: AN EXPLORATION OF TRIGGERING PATHWAYS, PSYCHOLOGICAL PROFILES, AND NEGATIVE CONSEQUENCES

*Proponente: Gianluca Lo Coco (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo)*

Prior clinical research on the characteristics of problematic social media use (PSMU) and its impact on wellbeing has yielded mixed results. The current symposium aims to move the field forward a deeper understanding of some developmental pathways of PSMU through both longitudinal and cross-sectional studies. The first presentation (Univ. of Florence) will focus on testing both the Fear-Driven/Compensation-Seeking and the Reward-Driven hypothesis (Wegmann & Brand, 2019) that can trigger PSMU. The second presentation (Univ. of Palermo) will examine the impact of different profiles of dysfunctional Facebook use on psychological distress during the second wave of the COVID-19 pandemic. The third presentation (Univ. of Padua) will focus on both the positive and negative reinforcement processes in PSMU during the COVID-19 pandemic and their impact on post-traumatic stress. The last presentation (Univ. of Bergamo) will report the results of a Latent Profile Analysis to identify different profiles of individuals with social media overuse and their psychological characteristics. The results of these studies can extend the conceptualization of PSMU by taking into account some different triggering pathways, and the link between PSMU and psychological symptoms over time.

## ARE THERE SPECIFIC SUBTYPES OF INDIVIDUALS WITH TECHNOLOGY OVER-USE? RESULTS FROM A LATENT PROFILE ANALYSIS ON TWO LARGE SAMPLES OF EMERGING ADULTS

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Excessive use of technology (i.e., smartphone, internet, social media and gaming) has become a worldwide problem due to its high prevalence, fast growth rate, and undesirable consequences. Despite being a prolific research topic, to date few studies tested for specific clusters of individuals with different levels of technology over-use. We performed secondary analyses of two large cross-sectional studies on emerging adults (Study 1: 539 participants, 70.1% females, mean age  $19.76 \pm 1.99$  years; Study 2: 727 participants, 66.3% females, mean age  $23.44 \pm 3.02$  years) who filled out a survey investigating technology over-use, and several additional psychological risk\ protective factors (e.g., attachment dimensions, psychological distress, impulsivity, or self-esteem). We run a Latent Profile Analysis on each sample and found that the best-fitting solution was characterized by three clusters: the low technology over-users, with high attachment security, self-esteem and low levels of risk factors (Profile 1), the average technology over-users with mean levels of psychological variables (Profile 2), and the technology addicted with high levels of risk factors (Profile 3). Results deepen our understanding of those factors that may increase the odds of developing a technology addiction.

## PROBLEMATIC SOCIAL NETWORKING SITES USE: AN EMPIRICAL EXAMINATION OF THE FEAR-DRIVEN/COMPENSATION-SEEKING HYPOTHESIS AND THE REWARD-DRIVEN HYPOTHESIS

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Two hypotheses on the development of Problematic Social Networking Sites Use (PSNSU) depending on individual differences in predisposing and reinforcing factors have been proposed: the fear-driven/compensation-seeking hypothesis (path A) including loneliness/social anxiety/depression and compensatory use expectancies (CE), and the reward-driven hypothesis (path B) including narcissism/need for self-presentation/need for popularity and positive use expectancies (PE). The two hypotheses were tested through path analyses in a community sample of 510 participants ( $F = 293$ ;  $M_{age} = 32.62 \pm 11.83$ ). Path A showed a good fit to the data [ $\chi^2 = 12.079$ ,  $df = 7$ ,  $p = .10$ ;  $RMSEA [90\%CI] = .04[.00-.07]$ ;  $CFI = .99$ ;  $SRMR = .02$ ], and the model accounted for 57.90% of the variance of PSNSU. Also, path B showed a good fit [ $\chi^2 = 10.152$ ,  $df = 4$ ,  $p = .04$ ;  $RMSEA [90\%CI] = .05[.01-.09]$ ;  $CFI = .99$ ;  $SRMR = .03$ ], with 57.10% of the variance of PSNSU explained. In Path A, the link between predisposing variables (e.g., loneliness) and PSNSU was mediated by fear of missing out, CE and avoidance expectancies; in path B a mediating role of PE and gratification expectancies was highlighted. The results support that individuals may develop PSNSU through different paths, depending on predisposing and reinforcing factors

## A MATTER OF BONDING: HOW DOES THE QUALITY OF PARENTAL CARE PREDICT ADOLESCENTS' SOCIAL MEDIA ADDICTION?

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Some studies have supported evidence that parental bonding is a central factor in adolescent social media addiction (SMA), but while empirical evidence on the nature of the relationship between parenting and SMA in adolescence is fewer. The aim of the present study is to investigate psychological mechanisms that maintain excessive use of SMA. Through analyze a sequential mediation model we explored both the direct and indirect effects of parental care on SMA by investigating the role of self-esteem and depressive symptoms in a sample of 440 adolescents. Results indicated that parental care was negatively related to SMA, which was itself negatively related to self-esteem and positively related to depressive symptoms. The mediation analysis results showed a significant association between parental care and SMA ( $\beta = 0.669$ ;  $p < 0.001$ ) and a significant chained mediation model in which low parental care negatively influenced the self-esteem ( $\beta = -0.742$ ;  $p < 0.001$ ), which affected the depressive symptoms ( $\beta = 0.352$ ;  $p < 0.001$ ). The presented study highlighted a significant role of parental care predicting the symptomatic expression of SMA among adolescents, specifically through its relation with self-esteem and depressive symptoms, linked to each other by a sequential influence.

## DYSFUNCTIONAL FACEBOOK USE AND PSYCHOLOGICAL DISTRESS DURING THE COVID-19 PANDEMIC

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The present longitudinal study examined whether changes in psychological distress during the 2nd wave of the pandemic differ among people with different levels of dysfunctional Facebook use (DFU). 493 individuals were recruited online ( $M_{age} = 24.55 \pm 7.25$ ; 80.3% females) and completed measures of DFU (i.e., Passive use, Facebook Social comparison, and Fear of Missing Out) and psychological distress (i.e., depression, fear of COVID-19 and life satisfaction) in a 3-wave panel study. Latent class analysis was used to classify participants into DFU groups. Findings showed that a three-class model (low DFU, moderate DFU, and high DFU) fits well with the data. Individuals in the high DFU group reported greater psychological distress at each time point. However, multilevel models showed no significant effects between latent class membership and changes in psychological distress over time. The results of this study suggest that different levels of DFU may reflect different levels, but not predict different trends of psychological distress during the pandemic.

## WHEN THE ENVIRONMENT BECOMES SO STRESSFUL: POSITIVE AND NEGATIVE REINFORCEMENT PROCESSES IN PROBLEMATIC USE OF SOCIAL MEDIA DURING AND AFTER COVID-19 LOCKDOWN

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The longitudinal relation between stress and problematic use of social media (PUSM) has yet to be understood. We investigated the links between COVID-related stress symptoms and PUSM, and the moderating effects of motives (positive and/or negative reinforcement) for using social media (SM) during and following lockdown. Six hundred and sixty participants filled in self-reports of PUSM, COVID-related stress symptoms, and motives for using SM (i.e., for negative reinforcement, involving coping and conformity, or positive reinforcement, involving enhancement and social motives) during lockdown. One hundred and seventeen participants completed again the self-reports after lockdown. Bayesian analyses revealed that PUSM was associated with more COVID-related stress symptoms and use of SM for coping, conformity, and enhancement motives. Longitudinally, PUSM symptoms worsening was associated with increased use of SM for coping. Use of SM for conformity and enhancement motives moderated the relationship between stress symptoms during lockdown and PUSM symptoms worsening after lockdown. Our results support the hypothesis that negative reinforcement processes may be key factors in PUSM. Under highly stressful circumstances PUSM may worsen through positive reinforcement mechanisms.

# SCREENING AND PREVENTION OF MATERNAL AND PATERNAL PERINATAL DEPRESSION

*Proponente: Sonia Mangialavori (Dipartimento di Fisiopatologia Medico-Chirurgica e dei Trapianti, Università degli Studi di Milano Statale)*

Transition to parenthood for most women and men is a fulfilling journey, but in some cases it can determine the onset of a depressive episode: screening and interventions for perinatal depression are therefore essential for optimal family health. Although interventions for both prenatal and postnatal depression are well established, most cases still go undetected. Given the proved efficacy of screening protocols, numerous professional organizations have issued recommendations for their implementation both prenatally and postnatally. The purpose of the symposium is to discuss and present recent evidence on the screening programs carried out by several research groups. 1 Screening for perinatal depression: S.O.S mamma Project (Terrone et al) 2 Screening for perinatal depression in expectant couples: the role of perceived stress and marital adjustment (Fontana, et al) 3 Stress, anxiety and depression in expectant mothers and their association with marital adjustment: a cluster analysis approach (Cataudella et al) 4 The Perinatal Assessment of Paternal Affectivity in expectant fathers: initial evidence of validity and reliability (Baltoni et al)



## SCREENING FOR PERINATAL DEPRESSION IN EXPECTANT COUPLES: THE ROLE OF PERCEIVED STRESS AND MARITAL ADJUSTMENT

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This study used an Actor-Partner Interdependence Model approach to evaluate the role of perceived stress and dyadic adjustment on risk of prenatal depression in primiparous couples. 138 couples were asked to complete questionnaires about perceived stress, dyadic adjustment and depression. Given that dyadic adjustment is found to be mutually determined by both partners, a plan of analysis utilizing the dyad was incorporated. The model revealed that only actor perceived stress and actor marital adjustment were significantly related to depression. While the effect of perceived stress on depression was stronger for the expectant mothers, there was no significant difference between mothers' and fathers' dyadic adjustment on their depression risk. Prenatal depression was not predicted by partner's stress and dyadic adjustment. However, both stress and dyadic adjustment in mothers were linked to fathers' ones. This study shows that pregnancy is a complex phase in which individual and relational factors may play a role in the development of depression in both members of the couple. It underlines the importance of dynamics within the couple in the development of depression, and it suggests that in clinical practice they should be considered.

## STRESS, ANXIETY AND DEPRESSION IN EXPECTANT MOTHERS AND THEIR ASSOCIATION WITH MARITAL ADJUSTMENT: A CLUSTER ANALYSIS APPROACH

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In the field of perinatal psychology, research has progressively focused on antenatal psychological disease of expectant mothers, showing that anxiety and depression as well as high levels of perceived stress occur frequently during pregnancy. Two aims: (1) to investigate the mental health of expectant mothers based on their levels of depression, anxiety, and perceived stress, identifying psychological profiles and (2) to analyze the association between these profiles and the relational variable of marital adjustment. Project S.O.S. mamma: expectant mothers during their third trimester of pregnancy were asked to complete questionnaires about perceived stress, dyadic adjustment, psychiatric symptomatology, and depression. Three different clusters were found: “psychologically healthy women” with low levels of symptoms on all the scales; “women experiencing moderate stress”, characterized by moderate levels of perceived stress and low scores in anxiety and depression scales; and “women at risk of perinatal mental distress”, with the highest scores on all the scales. Early and multilevel psychological screening is important in order to understand the experience of pregnant women and to develop targeted and increasingly personalized interventions.

## THE PERINATAL ASSESSMENT OF PATERNAL AFFECTIVITY IN EXPECTANT FATHERS: INITIAL EVIDENCE OF VALIDITY AND RELIABILITY

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Despite a growing interest in paternal perinatal mental health, there is still a lack of screening tools for the assessment of perinatal psychological distress in fathers. The aim of this study is to validate the prenatal version of the Perinatal Assessment of Paternal Affectivity (PAPA), an 8 item self-report tool for the screening of paternal affective disorders in fathers. We assessed 385 fathers during the third trimester of pregnancy, collecting data on sociodemographic characteristics, depressive symptoms, perceived stress, psychological symptoms, and couple adjustment. Confirmatory factor analysis (CFA) was performed to test structural validity. Concurrent validity was assessed by Spearman correlations. For internal reliability, we used McDonald's  $\omega$  and ordinal alpha. The CFA reported a one factor structure as the optimal solution ( $p < .001$ ). Concurrent validity was confirmed by significant correlations between PAPA score and standardized test scores ( $p < .05$ ). Non-Italian fathers and fathers who experienced one or more recent stressful life reported higher PAPA scores ( $p < .05$ ). These findings provide initial evidence for the validity and reliability of the PAPA as screening tool to detect symptoms and signs of paternal affective disorder during the prenatal period.

## SCREENING FOR PERINATAL DEPRESSION: S.O.S. MAMMA PROJECT

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Depression is one of the most frequent complication of the perinatal period. Is important (a) to distinguish between different types of symptoms (e.g., depression, anxiety, and stress) and (b) to consider not only continuous, but also discontinuous symptom. There are several recognized risk factors for perinatal depression. This study aims to whether and how the body dissatisfaction, adverse events in life, the anxiety, the five personality traits and attachment styles influenced the EPDS scores. A total of 170 women were involved in the study; the Project S.O.S. mamma of the University Hospital of Tor Vergata – Rome. The more the expectant mothers perceived the stress and anxiety related to the changing body and of threatening life events, the more they are at risk of prenatal depression, if this is combined with a discomfort attachment style and a low conscientiousness and openness of the personality traits the maternal depression it can become severe. The more mothers perceived threatening life events, the more they are at risk of prenatal depression, if combined with attachment of relationships as secondary, attachment in romantic relationships of the avoidace and anxiety, personality traits neurocism and conscientiousness, maternal depression can become serious.

## THE KEY ROLE OF CLINICAL PSYCHOLOGY IN CLINICAL SETTINGS

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This symposium shows the role of clinical psychology for the assessment of patients with medical diseases. The contributions allow a deeper knowledge of psychological experience in medical settings, accordingly to the body-mind processes. Life expectancy is increasing world-wide; age-related disturbances represents a relevant health concern. Chronic conditions impact quality of life, leading to psychological distress. Psychological features may also lead one's behavior, conditioning the management of chronic illness. Four contributions highlighting how psychopathological factors may influence health related experience, including adherence, compliance and treatment strategy, will be presented. The first contribution (Martino G., et al.) aims to explore, how anxiety Levels are associated with bone mineral density change in Postmenopausal Women under specific oral treatment. The second (Conversano C., et al.) evaluates the effectiveness of an on-line-based mindfulness stress reduction intervention in a sample of patients suffering from chronic low back pain. The third (Orrù G., et al.) examines the effectiveness and feasibility of a mindfulness-based intervention in a sample of Italian college students. The fourth (Negri M., et al.) shows psychological issues in emergency.

## ONLINE MINDFULNESS INTERVENTION FOR CHRONIC LOW BACK PAIN (CLBP): FINDINGS FROM A PRELIMINARY STUDY

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Chronic Low Back Pain (CLBP) is a leading cause of disability with significant repercussions on the psychological and socio-economic status of patients. Mindfulness may help reducing symptoms such as stress and depression. The aim of our preliminary study is to evaluate the effectiveness of an online-administered mindfulness stress reduction program (MBSR) in patients with lumbosacral localized pain either with or without sciatic radiation. During the first two months of 2022 patients with CLBP (n=7) were recruited in S. Chiara's Hospital, Pisa. Psychological testing was administered before the first session of MBSR, and it is scheduled at the end of the intervention. The measurements concerned mindfulness (FFMQ; MAAS), resilience and self-compassion (RS-14; SCS), pain (VAS; QUID) and pain attitude (TSK-11), disability (ODI-2.0), sleep quality (PSQI), depression (BDI-II), stress (PSS) and anxiety (STAI Y). Our preliminary findings show that a high perception of pain matches with lower resilience, self-compassion, and awareness of the present moment, confirming the need to apply interventions based on contemplative practices for these patients. From the post-test results we expect an improvement in sleep quality and lowered levels of stress, anxiety, and depression.

## EMOTIONAL DYSREGULATION AND AUTONOMIC REGULATION IN VASOVAGAL SYNCOPE: A MIND-BODY PERSPECTIVE

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VasoVagal Syncope (VVS) is defined as a transient loss of consciousness and postural tone, characterized by rapid onset, short duration, and spontaneous recovery due to transient cerebral hypoperfusion. In light of the polyvagal theory, VVS can be also viewed as an expression of body/mind dissociation resulting from altered dysfunctional neuroception. This study will use cardiac markers of autonomic activity (such as Respiratory Sinus Arrhythmia (RSA) and heart rate (HR)) to investigate the role of emotion dysregulation in VVS. Twenty-three adolescents with VVS were administered the Separation Anxiety Test (SAT) while their cardiac activity was recorded. Compared to resting conditions, both moderately and severely stressful situations were associated with markers of lower parasympathetic activity (RSA) and higher sympathetic activity (HR) (moderate stress RSA:  $F=14.485$ ,  $p<.0005$ ; HR:  $F=6.075$ ,  $p=.004$ ; severe stress RSA:  $F=13.094$ ,  $p<.0005$ ; HR: $F=6.484$ ,  $p=.004$ ). The findings suggest the relevance of psychological treatment aimed to promote emotion regulation abilities based on ventral vagal responses to the stress, tolerance to negative emotions, self-integration, and interpersonal regulation.

## PSYCHOLOGICAL ISSUES IN EMERGENCY UNITS (EVEN BEFORE THE COVID 19 PANDEMIC)

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Even before the Pandemic, the work of healthcare personnel in the emergency unit was considered arduous, both due to structural/organisational reforms that limited the presence of personnel and resources, and to socio-cultural transformations that led the population to visit the emergency unit increasingly. Our exploratory research was conducted on healthcare personnel (n=59) of 3 emergency units, through ad hoc semi-structured interviews administered to doctors to explore their experience of professional role and their relationship with patients. Computer assisted text analysis by means of T-Lab software was conducted to analyze the corpus of interviews. Four clusters emerged indicating the following emotional dimensions: physical and emotional effort due to the job, (cluster 1), the complexity of the doctor-patient relationship, (cluster 2), the management of the emotional weight in the doctor-patient relationship through the anchorage to technicality (cluster 3), the pain for the possible loss of the patient, contained through a fideistic expectation (cluster 4).



## ANXIETY LEVELS ARE ASSOCIATED WITH BONE MINERAL DENSITY CHANGE IN POSTMENOPAUSAL WOMEN: A TWO-YEAR FOLLOW-UP

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Clinical psychological features may represent predictors of medical diseases. Evidences exist on the link between anxiety level and postmenopausal osteoporosis, but it isn't clear the impact on bone mineral density (BMD). This research evaluates the association between anxiety, adherence and response to oral bisphosphonates (BPs) in osteoporosis. Anxiety levels and BMD were investigated through the Hamilton Anxiety Rating Scale (HAM-A) and dual-energy X-ray absorptiometry and respectively. Patients assumed oral treatment with alendronate and were grouped into tertiles (HAM-A 3 > HAM-A 2 > HAM-A 1) depending to the detected HAM-A scores. After two years of follow up BMD values were changed among HAM-A tertiles. The median lumbar BMD leap was significantly increased in HAM-A 2 and HAM-A 3 groups. Similar trend was observed in median femoral BMD change. Adherence was >75% in 68% of patients in HAM-A 1, 79% of patients in HAM-A 2, and 89% of patients in HAM-A 3 tertile ( $p = 0.0014$ ). Anxiety levels independently predicted lumbar BMD change ( $\beta = 0.3417$ , SE 0.145,  $p = 0.02$ ). In conclusion, postmenopausal women with higher anxiety levels showed significant BMD improvement, highlighting anxiety levels were associated with adherence and response to the medical treatment.

## A MINDFULNESS LABORATORY AS A TOOL AGAINST CHRONIC STRESS IN COLLEGE STUDENTS: AN ITALIAN PILOT AND FEASIBILITY STUDY

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College students are known to be at high risk of stress, often experiencing the onset of mental issues during their education. Chronic stress, maybe due to the academic load or the more adult-like responsibilities, increase emotional and psychological burden. In this regard, many studies have confirmed that learning meditation and practicing mindfulness have positive effects on mental health. The aim of this study is to evaluate the effectiveness of a mindfulness-based intervention in a sample of Italian college students. A 32-hour mindfulness laboratory was administered to an Italian college class (n=40) in January 2022. The questionnaires were completed both before and after the intervention, providing data on mindfulness levels (FFMQ; MAAS), stress (PSS), resilience (RS-14), defensive functioning (DMRS-SR-30), sleep quality (PSQI), depression (BDI-II), and anxiety (STAI Y). The findings confirm high levels of stress in the sample and a significant share of anxiety. Immature defense mechanisms correlate with low mindfulness levels. As predicted, the mindfulness laboratory improved sleep quality, awareness, and self-compassion, while lowering stress levels. This pilot study confirmed the effectiveness of mindfulness-based interventions in reducing stress in college students.

## TRAINING IN THE CLINICAL PSYCHOLOGY OF AGING: THE STATE OF THE ART AND FUTURE SCENARIOS

*Proponente: Giovanni Ottoboni (Dipartimento di Psicologia, Università di Bologna)*

The ageing of the population requires academic and clinical stakeholders to systematize a wider part of the future training courses to prepare professionals for psychological, psychosocial and integrated interventions. In the symposium, the three contributions overview the state of the art and new scenarios. The first contribution describes the importance for elderly people to rely on relational modalities capable of highlighting subjectivity and peculiarities. Evidence collected from people living with dementia and caregivers by psychologists attending the Post Graduate School in Clinical Psychology- University of Turin will be presented. The second contribution deepens the understanding of a complementary intervention for the treatment of behavioural and psychological symptoms of dementia. Music therapy is discussed by considering the results achieved with a group of older adults with dementia and the associated caregivers. The relevance for the future education agenda is discussed. The third contribution reports a recently-delivered curriculum of studies on psychosocial care in dementia. The SiDECAR curriculum is forging the next generation of European professionals to offer the most personalized care to people with dementia and associated caregivers.

## CLINICAL INTERVENTIONS FOR PATIENTS WITH NEUROCOGNITIVE IMPAIRMENT AND THEIR CAREGIVERS: BETWEEN MEMORY, UNCONSCIOUS AND IDENTITY

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Since birth, happenings of life and relational interlacements contribute to the development of a specific individual existential project, in both its conscious and unconscious facets. It is of fundamental importance that elderly people can rely on relational modalities that take into account their own subjectivity, the ways they perceive their bodies and their transformations, their capacity of action in the external world, as well as affects related to all these aspects. This is especially relevant when elderly people have to face many disabling symptoms. Elders should not be left alone in facing conditions such as neuro-cognitive impairment: they need a caregiver capable of supporting them in the concrete aspects of life they can no longer manage independently, as well as in facing the psychological consequences of living with dementia. Someone with whom looking together for a shared meaning for symptoms and difficulties that can come across the process, focusing on elders' somatopsychic functioning in their concrete and relational environment. The authors will describe this process through clinical material of elders affected by dementia and their caregivers, collected by psychologists attending the Post Graduate School in Clinical Psychology of the University of Turin.

## EARLY DETECTION AND DIAGNOSIS OF NEUROCOGNITIVE DISORDERS IN PRIMARY CARE: A PILOT STUDY

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The lack of registration of neurocognitive disorders (NCDs) by general practitioners is due to several factors that include the scarcity of brief, sensitive, specific, culturally valid neuropsychological tools required for the early and differential diagnosis and monitoring of cognitive impairment, notably at preclinical stages. It should be noted that the prevalence rate of Mild Cognitive Impairment (MCI) and Aging-Associated Cognitive Decline (AACD), possibly prodromal to a dementia, is highly variable, ranging from 8 to 30% in the Italian population aged over 65 years. In addition to MCI and AACD, there are further conditions called Cognitive Impairment No-Dementia (CIND) affecting around 22% of aged people and thus unfolding the need for updated and harmonized screening procedures in territorial medicine. Accordingly, this ongoing longitudinal study, approved by the local ethics committee of ASL-Bari and Bari University Hospital, involves a team of clinical psychologists to carry out the administration to 450 individuals (i.e., people aged over 65 years registered in 5 databases of primary care in Apulia region) of a novel, multidomain assessment protocol to allow for the validation of a comprehensive screening algorithm for NCDs in general population.

## EFFECTIVENESS OF A MUSIC THERAPY INTERVENTION FOR CAREGIVERS AND ELDERLY PATIENTS WITH DEMENTIA: A RCT STUDY

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Music therapy (MT) is considered one of the complementary strategies to pharmacological treatment for behavioral and psychological symptoms (BPSD) of dementia. A sample of 60 elderly people with moderate-to-severe dementia of the Auxologico Institute (Milan, Italy) and associated caregivers were randomly assigned to an Experimental Group (EG) (n = 30) undergoing 30 min of MT two times a week for 8 weeks and to a Control Group (n = 30) (CG) receiving treatment as usual. Before and after the intervention, residents-associated caregivers were administered the Caregiver Burden Inventory (CBI) and the Neuropsychiatric Inventory (NPI). A mixed model ANCOVA was performed after controlling for significant differences between groups at baseline. Findings revealed a Time\*Group effect (p = 0.006) with regard to CBI decreasing after the intervention for the EG and Time\*Group effects (p = 0.001) with regard to NPI\_frequencyXseverity and NPI\_distress, with a greater effect for the EG than the CG. Clinical psychologists of aging should consider the potential therapeutic effects of MT both for patients and their caregivers in order to set up integrated interventions in individual or group sessions. Applying MT in clinical contexts may constitute a key point of future education agenda.

## HIGHER EDUCATION IN PSYCHOSOCIAL CARE IN DEMENTIA: A NEW CURRICULUM OF STUDY

*Giovanni Ottoboni (Dipartimento di Psicologia, Università di Bologna)*

Dementia is a health priority worldwide. As no new drugs show are available, the psychosocial interventions are the ones that are proven to enhance the quality of life of people with dementia and their caregivers. Notwithstanding their efficacy, such interventions are barely translated into clinical practice. To fill the gap, rigorous and evidence-based curricula of studies should be encouraged to educate the next generation of professionals working with people with dementia. The European state of the art is tackled in searching for curricula of studies preparing students for the challenges that the increasing ageing population will occur in the next years. Most of the teaching activities preparing the European students on the psychosocial care necessary for the people living with dementia fall within the second level of the Bologna Process. Almost half of them are spared courses; a fifth are modules, the remaining spare topics. One-fifth of them frames psychosocial care with theoretical limits and about practice. Most of them are distributed in central/western institutes/universities. Results are discussed in the light of the SiDECAR curriculum of study, i.e., an outcome from an Erasmus+ KA2 Strategic Partnerships for HE.

## TRAUMA ACROSS THE LIFESPAN: AN OVERVIEW ON PSYCHO-NEUROBIOLOGICAL EFFECTS

*Proponente: Cristina Trentini (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

The exposure to traumatic experiences causes detrimental effects on a multifaceted constellation of domains, belonging to both the psychological as well as neurobiological level. The aim of this symposium is to present studies evaluating such trauma-induced sequelae across the lifespan. The first contribution (Trentini, Bussone, Pesca, Carola) illustrates the impact of different types of early interpersonal traumatization on biological aging, neurophysiological activity, and psychological functioning in young adults. The second contribution (Nicolais, Cammarella, De Romanis, Ferracci, Ghezzi, Gizzi, Menozzi, Nassisi) presents data coming from the assessment of parental skills in two single mothers with a history of early maltreatment. The third contribution (Carletto) illustrates the results of both a pilot RCT and a cross-sectional study. The former examines the effectiveness of an EMDR intervention in women with post-partum PTSD, whereas the latter investigates the psychosocial factors associated with postpartum distress during the COVID-19 pandemic. The fourth contribution (Palmieri, Pick, Romaioli, Marcato, Sorarù) delineates the role of psychological trauma on excitotoxic damage/neurodegeneration, defining the complex pathogenesis of amyotrophic lateral sclerosis in adults.



## THE IMPACT OF DIFFERENT TYPES OF EARLY INTERPERSONAL TRAUMA ON BIOLOGICAL AGING, NEUROPHYSIOLOGICAL ACTIVITY, AND PSYCHOLOGICAL FUNCTIONING IN YOUNG ADULTS

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A large body of research has provided strong evidence of the detrimental effects of early interpersonal trauma (EIT) on socio-emotional, behavioral, cognitive, and physical domains of the individual's functioning. Nevertheless, the mechanisms elicited by the exposure to different types of EIT as well as their impact on neurodevelopmental trajectories have yet to be fully elucidated. To fill this gap, we investigated biological aging, neurophysiological activity, and psychological functioning in young adults who were previously classified according to the type of EIT. In these groups, salivary telomere length (TL) was acquired (as a measure of biological age) and resting high-density electroencephalography (hdEEG) was recorded (as a measure of resting-state neurophysiological activity). Clinical scales evaluating the quality of attachment bonding, affect regulation, and psychopathology were also administered. Analyses showed interesting differences between the groups in terms of TL, neurophysiological features of resting hdEEG, as well as clinical measures. Such findings may enrich the knowledge about the modulatory role of different types of EIT on the individual's psycho-neurobiological functioning in young adults.

## THE INTERGENERATIONAL TRANSMISSION OF TRAUMATIC EXPERIENCES: IDENTIFICATION OF RISK AND PROTECTIVE FACTORS DURING THE EVALUATION OF PARENTING SKILLS OPERATED BY THE REGIONAL SPECIALIZED CENTRE “GIORGIO FREGOSI”- SPAZIO SICURO IN ROME

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Child abuse & neglect experiences endured during childhood could have a negative impact on psychophysical functioning (van der Kolk, 2005) influencing parents' caregiving ability activated during the transition to parenthood (Frueh et al, 2013). Some Authors highlighted that not all parents who experienced maltreatment become maltreating because of the “gap” of transmission in attachment models. Aim of this work is to illustrate the assessment of two clinical situations in the context of parenting skills evaluation. We underline different outcomes when some variables intervene to interrupt the transmission of abuse. Parental assessment is carried out with clinical interview, instruments like AAI, MMPI-2, SCL-90R, PSI, CBCL and observation of parent-child interactions. We selected two young and single mothers who suffered for severe neglect, refusal, domestic violence, and physical maltreatment. Both presented an insecure-disorganized mental state with respect to attachment. Significant differences were found in personality profiles, social support and institutional care interventions during childhood. This work highlights the importance of prevention and identification of hidden risk factors, to stop the intergenerational transmission of abuse.

## ASSOCIATIONS BETWEEN PSYCHOLOGICAL TRAUMA AND AMYOTROPHIC LATERAL SCLEROSIS ONSET: A POPULATION-BASED QUANTITATIVE AND QUALITATIVE STUDY

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The association between previous traumatic experiences and neurological diseases has been recently raised in literature. However, it has never been identified in patients with amyotrophic lateral sclerosis (pALS). We retrospectively assessed traumatic events with Traumatic Experience Checklist (TEC) in 71 pALS and 75 healthy controls (HC). A subsample of 31 pALS (and 31 HC) accepted to be domiciliary interviewed about the details of the traumas emerged from the TEC. Five external, blind judges, evaluated the interview verbatim content focusing on sense of helplessness. Mixed-effects regression model analyses showed that patients had more traumas than HC 5–15 years before onset. Interviews evaluations revealed that pALS experienced significantly greater helplessness ( $p = 0.01$ ) than HC in the above mentioned temporal window. Although the limitations imposed by the nature of retrospective studies, our findings can contribute to delineate one of the factors predisposing to ALS. If confirmed by further studies, these findings can have a value both in terms of deepening the role of psychological trauma on excitotoxic damage/neurodegeneration and of better defining the complex, still partially unknown, pathogenesis of ALS.

## PROMOTING RESILIENCE IN THE PERINATAL CONTEXT: RESEARCH ON PSYCHOSOCIAL FACTORS ASSOCIATED WITH POST- TRAUMATIC SYMPTOMS AND PSYCHOLOGICAL INTERVENTIONS TO PREVENT POSTPARTUM PTSD

*Sara Carletto (Università degli Studi di Torino)*

Giving birth can sometimes be experienced as a traumatic event. Research indicates that around 30–40% of women reported a stressful birthing event and post-traumatic symptoms, resulting in a full diagnosis of post-partum PTSD (PP-PTSD) in 3–4% of women in community samples and 15.7–18.9% in high-risk samples. Symptoms of PP-PTSD may have a subsequent negative impact on women's health and relationships, on the development of the mother–infant bonding, and even on child outcomes. During the oral contribution, the results of two studies will be presented. The first was a pilot RCT evaluating the effectiveness of a brief early EMDR intervention compared to TAU, both delivered in a maternity ward in the aftermath of childbirth, in women with PP-PTSD symptoms. EMDR resulted more effective than TAU in reducing the proportion of women with PP-PTSD symptoms at 6-weeks' post-partum. The second was a cross-sectional study investigating the psychosocial factors associated with postpartum psychological distress during the COVID-19 pandemic, showing that, despite an increase in symptoms compared to the pre-pandemic period, postnatal psychological distress seemed to be associated more with the prenatal experience and other individual factors than with the pandemic hospital restrictions.

## TREATING PTSD? THE REWIND TECHNIQUE FOR CLOSURE WITHOUT DISCLOSURE

*Anna Maria Meneghini (Dipartimento di Scienze Umane, Università di Verona), Sergio Poletti (International Association for Rewind Trauma Therapy), David Muss (International Association for Rewind Trauma Therapy)*

The Rewind Technique (RT) is a trauma-focused imaginal exposure protocol for PTSD treatment that deals with the patient's fear evoking stimuli to diminish feelings of fear and anxiety. It usually takes one or a few sessions and does not involve the need for the patient to reveal the details of the traumatic event to the therapist. This makes RT especially adequate for shame-based trauma, e.g. for sexual trauma, very common among the clients of anti-violence centres. As the long-term efficacy of the RT has never been systematically investigated before, this study aims to test it. Twenty clients ( $M_{age} = 35.30$ ,  $SD = 12.37$ ; 100% female) were recruited at a local anti-violence centre. The participants' symptoms are assessed by means of the PTSD Checklist for DSM-5 before the RT and 3 months later. The comparison of the PCL-5 scores assessed before and after the treatment showed that, on average, the treatment had a clinically significant effect ( $t = 8.680$ ;  $p < .001$ ) and each of the four symptom clusters reports a significant reduction ( $p < .001$ ). RT seems a particularly suitable technique to be used in contexts such as anti-violence centres, thanks to its feature being easy to use and to impart to therapists.

# UNDERSTANDING WOMEN'S SUBJECTIVE EXPERIENCE OF CANCER DIAGNOSIS: EMOTIONS, COPING STRATEGIES, AND DECISION-MAKING PROCESSES

*Proponente: Federica Facchin (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Cancer diagnosis is a stressful experience due to biographical disruption, fear of death, sense of vulnerability and uncertainty for the future. Researching women's subjective experience of cancer diagnosis, in terms of emotional reactions, coping strategies and decision-making processes, can improve quality of care. The aim of this symposium is to provide an in-depth analysis of these subjective aspects related to cancer diagnosis, considering the evidence offered by studies with different methodologies. Buizza and colleagues will present the results of a multicenter randomized controlled trial including women with breast cancer at their initial consultation with an oncologist, focusing on communication and decision-making. Martino and colleagues will examine the role of women's autobiographical memory narratives in adjusting to and coping with breast cancer. Facchin and colleagues will examine women's subjective experience of breast cancer diagnosis during pregnancy, focusing on the complexity of their emotional reactions, related to the coexistence of pregnancy and cancer. Marinelli and colleagues will explore the mental health of women undergoing surveillance for pancreatic neoplasms. The wider implications for clinical practice will be discussed.

## THE CONTROL PREFERENCE ROLE IN A SAMPLE OF EARLY-STAGE BREAST CANCER PATIENTS DURING THE DECISION-MAKING PROCESS. A MULTI-CENTERED RANDOMISED CONTROLLED TRIAL

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Cancer patients show different control preference roles in the decision-making process: sharing responsibility with the oncologist, having a more active role or delegating the decision to the oncologist. The literature shows conflicting data on role preferences, in particular on how they change in the different stages of the oncological disease. The aim of the present study was to evaluate the control preference role in the decision-making process in a sample of early-stage breast cancer patients and possible associated variables. The sample consisted of 308 patients. The tools used were: Control Preference Scale, State Trait Anxiety Inventory-X1, General Health Questionnaire, Patient Health Questionnaire-9, Shared Decision Questionnaire. The preference for a collaborative role represented 54.2% and was more frequent among single and employed women. These women asked more questions and had a longer consultation than patients with a passive position. Patients who chose a passive role were older than those who preferred a collaborative role and more frequently had no previous breast surgery. The findings show the role that patients with early-stage breast cancer would like to play and the variables that contribute to their involvement in the decision-making process.

## CANCER DURING PREGNANCY AND ITS EMOTIONAL STORM: LESSONS LEARNT FROM WOMEN'S SUBJECTIVE ACCOUNTS

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Cancer during pregnancy is a rare event that occurs in approximately 1/1,000-2,000 pregnancies, but the number of cases is expected to rise in the future. Understanding women's emotions and needs following this diagnosis may improve quality of treatment. The current study aimed at grasping the characteristics of this experience, with a specific focus on the emotional dimension, as reported by women in their subjective accounts. This qualitative study oriented by an interpretative-phenomenological approach, and data were collected using in-depth semi-structured interviews. Participants were 5 pregnant women diagnosed with cancer during pregnancy (age: 31-45 years), purposefully recruited at a public hospital. The interviews were analyzed thematically. Women reported overwhelming, paradoxical emotions: the joy for the growth of a new life, combined with fear of death (for themselves and for the baby), sense of vulnerability and worries about the consequences of treatment, and feelings of inadequacy related to comparisons with healthy women. Confusion was predominant immediately after the diagnosis. Women's subjective accounts may lead to an in-depth understanding of their experience, with useful information for clinical practice, including shared decision-making processes.



## PSYCHOLOGICAL DISTRESS IN PATIENTS UNDERGOING SURVEILLANCE FOR IPMN OF THE PANCREAS: A POTENTIAL FURTHER RISK TO THE QOL OF WOMEN

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Intraductal papillary mucinous neoplasms (IPMNs) of the pancreas are well-known premalignant lesions that can be safely surveilled over time. The diagnosis of a cystic neoplasm with uncertain biological behavior could profoundly alter people psychological wellbeing. In particular women, might face specific psychosocial challenges related to this condition, for example, in referral to their family and social role. Emotional distress, when present, could negatively affect their adherence to surveillance protocols for IPMNs, thus impairing their quality of life. The aim of the present study is to profile the psychological impact of patients under surveillance, with a specific attention to women's mental health. Two hundred patients were profiled with a set of questionnaires (BSMSS, Brief-COPE, PSS, SCL-90 and SF-36). Symptoms such as somatization (0.71), depression (0.45) and anxiety (0.45) were reported by patients, as well as a reduced health perception in the domain of physical role functioning (54). Findings from this study suggest that facing the "Sword of Damocles" effect, might lead to a psychological distress that requires interventions tailored on patients needs, aimed to reduce the burden of these chronic exposure to uncertainty.

## EXAMINING AUTOBIOGRAPHICAL MEMORY NARRATIVES GENERATED IN RESPONSE TO BREAST CANCER TREATMENT IN WOMEN UNDER 50: CLINICAL IMPLICATIONS

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In the Narrative Identity framework the translation of memories into autobiographical narratives is an internal/external process that play a crucial role in meaning-making, social relationships and self-coherence. Our aim is to examine the role that autobiographical memory narratives play in the process of adaptation to breast cancer (BC). Seventeen BC women below 50years received prompts to provide autobiographical memory narratives at 4 phases during their treatment (pre-hospitalization-T1-post-surgery-T2-chemo-radio therapy-T3-follow-up-T4) and 68 autobiographical memories were identified. An ad hoc qualitative coding manual to analyze key dimensions was developed: Degree of Agency DA; Emotional Regulation ER and Interpersonal Relations IR. Results show a biggest shifts in memory narrative were from T1 to T3. DA: Passivity/Helplessness increased from 44% to 57%; ER: Struggle increased from 35% to 56%; IR: Giving to Others and Faith decreased from 51% to 19%. Findings highlight particular vulnerability in narrative identity faced by BC women during the chemo-radio treatment/post-surgery phase. Clinical psychologists should make sure that additional counseling and peer-group support are available during this period in which the women's sense of narrative identity was disrupted.

# PERSONALITY

## THE DARK FACE OF REVENGE PORN: THE INFLUENCE OF DARK TRIAD ON REVENGE PORN PROCLIVITY

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In this study we present a research work focused on the factors that favor the non-consensual dissemination of intimate images, this phenomenon is known as revenge porn. Research has highlighted the role played in this context by the dark triad (DT), however, given the compatibility of psychopathic, machiavellian and narcissistic traits with the attitudes of dehumanization in romantic relationships (DRR), we assumed that this factor played an important role in the propensity to revenge porn as well as ambivalent sexism (AS). Objective: we hypothesized that DRR and AS may be correlated with DT traits and revenge porn proclivity (RPP), and that DRR (M1) and AS (M2) may be mediating factors between DT traits (X) and RPP(Y). Method: A sexually active sample of 625 subjects, aged 18-66 years, was recruited ( $M = 33.08$ ,  $SD = 9.87$ ). Results show a correlation between the dehumanization factor and sexism attitude with DT personality traits and the RPP. The RPP shows correlations with all the previous variables except the narcissistic personality trait. DRR and AS are confirmed as a mediator between DT traits and RPP.

## PSYCHOTIC EXPERIENCES IN BORDERLINE PATIENTS: THE ROLE OF SITUATIONAL/INTERPERSONAL REACTIVITY

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Psychotic symptoms in borderline personality disorder (BPD) are common, distressing, and challenging to treat. Yet, little is known about their specific characteristics. The aim of this study is to investigate psychotic experiences in borderline patients comparing them with those of psychotic patients. Two groups of adult psychiatric patients (aged 18-65 years), one with BPD and the other with schizophrenia, were administered a questionnaire assessing the presence and phenomenology of psychotic experiences, together with self-reports measuring situational dysphoria, interpersonal problems, and past traumatic experiences. Student's t-test was used to analyze data. No statistically significant differences were found between the two groups. However, BPD patients showed more heterogeneous hallucinations, higher distress due to paranoid delusions, and higher level of situational dysphoria, along with more childhood traumatic experiences and current interpersonal sensitivity, than schizophrenic patients. Psychotic symptoms in borderline patients seem to show specific psychopathological features strictly related to a high situational/interpersonal reactivity in the shadow of past relational trauma. Further research in clinical samples is needed.

## ON HYSTERIA: SE-DUCING IS NOT SEX-DUCING

*Milena Mancini (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti), Martina Scudiero (Università degli Studi G. d'Annunzio di Chieti), Silvio Mignogna (Università degli Studi G. d'Annunzio di Chieti), Valentina Urso (Università degli Studi G. d'Annunzio di Chieti), Giovanni Stanghellini (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

This presentation aims to “de-hysterizing” hysteria by removing the stigma according to which it represents a gender pathology with sexual connotations. Hysteria has been mainly considered as a mostly exclusively female pathology frequently associated with cultural/religious features. For this reason, we propose it is necessary to “undress” hysteria from feminization and sexualization and to reconfigure the traditional paradigm conceiving this condition as a prerogative of a sexualized and feminine corporeality. From a diagnostic perspective, hysteria includes a set of heterogeneous symptoms, often overwritten by other clinical domains. Rather than focusing on gender and sexuality, we suggest to characterize hysteria focusing on the way persons with hysteria experience their world, i.e. the hysteric person’s lived space, lived time and intersubjectivity. From this perspective, emotional intensity, spatial centrality, figurality and what we call “impressionality” reveal themselves as being the core characteristics of the hysteric life-world. All the aforementioned features have visibility and oculo-centrism as their common denominators and they are closely related to intersubjective dimension, namely the otherness.

## DEFINING THE COGNITIVE-RELATED LEVELS OF FUNCTIONING OF PERSONALITY: THE ‘NEUROPSYCHOLOGY OF INDIVIDUAL DIFFERENCES’

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Neuropsychological studies on emotional disorders underscore the importance of defining the individual patient’s neuropsychological profile to plan effective interventions. We suggest that individual differences in the patient’s functioning can be captured by examining three main levels of functioning. The automatic level includes implicit memory, implicit social cognition and executive-related behavioral regulation processes describing the individual’s automatic behavioral schemas. The reflective level includes explicit social cognition processes defining the individual’s introspection and self/other mental states understanding processes. The strategic level includes executive functions implied in cognitive and emotional regulation processes defining the individual’s self-monitoring and self-regulation skills. Here, we use the term ‘neuropsychology of individual differences’ to refer to the study of personality and individual differences through the description of the above three levels of neuropsychological functioning. This perspective offers translational clinical implications, in the context of cognitive-behavioral psychotherapy, providing hints to better combine standard interventions with cognitive remediation and improve treatment efficacy.

## CANNIBALISM AND NARCISISSM: THE ASSIMILATION PROCESS FROM ANTHROPOLOGY TO PSYCHOPATHOLOGY

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Starting from Remottis model of Tupinamba tribe cannibalism, we will provide a new key to understanding the way in which the narcissistic person experiences the Other. Cannibalism represents the last step of a progressive procedure of assimilation, according to which, it is necessary to start a process that gradually makes the other similar to oneself. This process determines a change of status from stranger to familiar through which the Other can be cannibalized. This ritual-cultural practice approaches the clinical paradigm of the relationship with alterity. Particularly, its very similar to the way in which the narcissistic person sees the Other and to the process of erosion to which the latter is subjected. In the narcissistic world, the Other represents a complement for the fulfillment of ones project, but in order for it to become a means to ones own purpose, it must be made palatable, triggering a process of assimilation aimed at corroding its alterity, i.e., gradually undermining what escapes the possibility of making it a tool for achieving a goal. According to these observations we will try to draw a line that, starting from the anthropological level, reaches the psychopathological level, connecting the two phenomena object of our study.



## **TECHNOLOGY AND CLINICAL PRACTICE**

## THE LONG-LASTING EFFECTS OF VIDEOCONFERENCING ANALYTIC PSYCHODRAMA ON ANXIETY-DEPRESSIVE PROBLEMS IN YOUNG ADULTS

*Roberta Biolcati (Università di Bologna), Federica Ambrosini (Università di Bologna)*

Analytic Psychodrama (AP), a model of group psychoanalytic psychotherapy, has already shown efficacy in the treatment of anxiety-depressive problems in young adults. With the COVID-19 pandemic, despite specific challenges related to its technique involving a body in action component, AP was carried out via videoconferencing at the Psychological Counselling Service of the University of Bologna. Eight participants (F=50%) with anxiety-depressive problems took part in 38 weekly group sessions of online AP. The Clinical Outcomes in Routine Evaluation–Outcome Measure (CORE-OM), the Trait Emotional Intelligence Questionnaire–Short Form (TEIQue-SF), the Toronto Alexithymia Scale (TAS-20) and the Interpersonal Reactivity Index (IRI) were used to assess clinical outcomes and emotional competence at baseline, after 10-months of treatment and at 6-month follow-up. Repeated Measure ANOVA found significant differences across time in all CORE-OM dimensions (except for the Risk scale), in TEIQue-SF and TAS-20 global scores, but not in IRI dimensions. This study highlights that online AP shows positive outcomes in treating young adults' anxiety-depressive problems, with long-lasting effects on functioning. Furthermore, it succeeds in modifying structural factors such as Trait-EI and Alexithymia.

## ROLE OF A SPECIFIC METACOGNITIVE MEDIATION ON THE COGNIPLUS COMPUTERIZED REHABILITATION TRAINING

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CogniPlus is a computerized training widely used to treat many cognitive difficulties after severe Acquired Brain Injury (sABI), such as attention. However, one of the main obstacles in rehabilitation is impairment in self-awareness (SA). Toglia and Kirks proposed a model of SA which posits a meta-cognitive (i.e., a purely declarative and prior to a performance) SA, and an online monitoring of the performance. Aim of the present study was to verify if an intervention on SA could improve the effectiveness of the CogniPlus. Seven participants with sABI who received the CogniPlus to treat selective and divided attention were assigned to the experimental Group (i.e., patients who received cues on SA during the Cogniplus; N= 3) or the control Group (i.e., patients who performed the CogniPlus without any cue; N= 4). Our results show an improvement in the experimental group in the selective attention (i.e. Test of Attentional Performance), and a better performance in 4 sub-components of the CogniPlus (i.e., higher number of responses, lower speed of response, lower numbers of missed and not requested responses). Our data could suggest that a computerized trainings could benefit of a specific intervention on SA mediated by the cognitive therapist in order to improve its effectiveness.

## THERAPIST SELF-EFFICACY IN ETHERAPY: THE RELATIONSHIPS WITH GENERAL SELF-EFFICACY, SELF-ESTEEM, AND INSIGHT ORIENTATION

*Alessio Gori (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Eleonora Topino (Dipartimento di Scienze Umane, Lumsa Università di Roma)*

The Internet has become increasingly accessible and used, allowing for the new implementation of digital mental health interventions, such as eTherapy. The present study aimed to explore the relationship between General Self-Efficacy, Self-Esteem, and Therapist Self-Efficacy during eTherapy activity in a synchronous video-based setting, with the mediation of Insight Orientation. A sample of 280 Italian mental health professionals (Women = 248; 36% psychologists, 64% psychotherapists; Mage = 32.3, SD = 12.53) completed the Therapist Self-Efficacy Scale, Insight Orientation Scale, Rosenberg Self-Esteem Scale, and General Self-Efficacy Scale. Our results showed significant and positive total effects in the relationships between Self-Esteem and Therapist Self-Efficacy ( $\beta = .28, p < .001$ ), as well as between General Self-Efficacy and Therapist Self-Efficacy ( $\beta = .25, p < .001$ ). Insight Orientation significantly mediated these associations, such that when inserted in the model the direct of General Self-Efficacy became non-significant ( $\beta = .02, p = .773$ ), unlike that of Self-Esteem which, while decreasing, remains significant ( $\beta = .21, p < .001$ ). Such findings can provide useful information to elaborate tailored eTherapy training for mental health professionals.

## BIOGRAPHICAL CHANGE: THE ROLE OF CLINICAL QUESTION AND MACHINE LEARNING FOR CLINICAL PURPOSES

*Jessica Neri (Università degli Studi di Padova), Luisa Orrù (Università degli Studi di Padova), Gian Piero Turchi (Università degli Studi di Padova)*

Despite the specificity of the theoretical-methodological references, clinical psychology and psychotherapy share a goal of change and promotion of health and well-being for the individual, the couple, or the Community. In this field, thanks to the recent progress in optimization algorithms and available hardware, Artificial Neural Networks - in which Machine Learning is included - have been applied to different domains: to answer questions about the personalization of therapies, the measurement of their effectiveness and how to direct change. This contribution aims to describe specific results of a wider research, developed with the M.A.D.I.T. text analysis methodology and the use of ML models. The research dataset consists of 14,567 open-ended question response excerpts, or 190,000 graphical forms. One of the fundamental tools for clinical practice will be discussed: the question and its use value, that is, its ability to generate sense of reality and direct change in peculiar directions. The analysis allows us to isolate and analyze precise configurations of sense and to frame a predictive model based on the use value of questions. The results allow to propose considerations on the clinical utility of the question and predictive models for biographical change purposes.

## CAN VIRTUAL REALITY ENHANCE EFFICACY IN THE TRAINING OF PROGRESSIVE MUSCULAR RELAXATION TECHNIQUE? A PILOT STUDY

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A technique deployed to reduce anxiety symptoms is represented by the integration of PMRT with Guided Imagery. The reason behind imagination exposure to a pleasant environment is that it helps to establish an association between a relaxing scenario and the relaxation technique, thus promoting relaxation. Empirical evidence has shown that VR scenarios (VRs) can enhance the effects of relaxation techniques by enabling people to experience emotional conditions in more vivid settings. To further exploring the role of VR in relaxation we have designed a pilot study to investigate the impact on state anxiety of PMRT associated with a personalized-relaxing VRs, and the role of VRs in facilitating recall of relaxing images and sense of presence. Seventy individuals were randomly exposed to an in-imagination relaxing context or to a relaxing VRs. Individuals were assessed before and a week after the experimental session. Assessment measures collected were heart frequency, self-report questionnaires investigating depression, trait-and-state anxiety, stress, and quality of life. In our presentation, we will report main results on differences between the two groups.

# **THE COVID IMPACT ON SELF AND RELATIONSHIPS**

## “THIS IS WHAT LIFE IS ALL ABOUT: ROMANTIC COUPLES’ MEANING-MAKING OF DEATH. A PILOT STUDY WITH ITALIAN COUPLES BEFORE THE COVID-19 PANDEMIC

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According to the humanistic-existential perspective, people develop and attribute meanings to death that impact their life purpose (Wong et al., 1994). The romantic experience represents a particular case of the meaning-making process in which partners negotiate meanings and co-construct a dyadic reality (Molina et al., 2018). Experimental quantitative research acknowledged that romantic relationships have an existential function: individuals seek romantic close others to cope with the anxiety triggered by death reminders (Mikulicic et al., 2003). Concurrently, little is known about couples’ meaning-making of death. This pilot qualitative study explored death-related meanings within romantic couples. Conjoint semi-structured interviews were conducted with 4 Italian heterosexual middle-aged and married couples in February 2019, before the COVID-19 outbreak. Thematic analysis was performed (Braun & Clarke, 2006) supported by the software ATLAS.ti. Three main themes were identified: partners’ sharing attitudes towards death; partners’ intimacy in loss(es) contexts; partners’ dyadic views of life. This study highlights insights for clinical work with couples facing mortality-salient and existentially challenging situations.



## BIOPSYCHOSOCIAL TREND OF INSTITUTIONALIZED ELDERLY BEFORE, DURING AND AFTER COVID-19: THE CASE OF TWO ITALIAN NURSING HOMES

*Laura Ceppi (Università degli Studi di Milano-Bicocca), Giulio Costantini (Università degli Studi di Milano-Bicocca)*

This longitudinal study (09/2018-09/2021) explored the effects of the COVID-19 pandemic on psychological (e.g., depression, anxiety), biological (e.g., nutrition), and social factors (e.g., contacts with family) in elderlies living in two Italian nursing homes. The study involved 252 elderlies (202 women; M age =86.5, SD = 7.48), tested every six months. Data were analyzed using multilevel linear models. A trend of maintenance or progressive deterioration emerged before COVID-19, with a steeper worsening during the pandemic period for most indices (e.g., cognitive functions, need for assistance). Interestingly, positivity to COVID-19 predicted further worsening only in some variables (e.g., weight, nutrition), whereas worsening in most variables (e.g., level of clinical deterioration, need for assistance, comorbidity, basic autonomies, depression, anxiety, agitation) occurred irrespective of positivity. Contacts with family members were more frequent for guests who became more fragile during the pandemic. However, there was no evidence of the efficacy of social contacts in mitigating symptoms. Overall, the results indicated that the pandemic period, more than the actual positivity to the COVID, played a role in affecting the elderlies' condition.

## MALADAPTIVE PERSONALITY TRAITS: AN EMERGING RISK DURING THE COVID-19 PANDEMIC. PRELIMINARY RESULTS OF AN EMPIRICAL RESEARCH

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The COVID-19 pandemic may lead to negative affective responses, which are linked to psychological maladjustment and psychopathology. A recent review of the literature on the psychological effects of quarantine highlighted the highest likelihood of quarantined persons to show psychological distress (Brooks et al., 2020). Indeed, several works have already shown concern over the potential consequences on global mental health (Mazza et al., 2020). Therefore, the present study was devoted to investigate the relationship between difficulties in emotion regulation, depression, anxiety and maladaptive personality traits (i.e., negative affect, detachment and psychoticism) and their joint effects on COVID-19-related worries (crisis preoccupation). An online survey was administered to 1172 adult participants (Females = 779). We showed that individuals high in depression, anxiety and maladaptive personality traits experienced more negative affect and higher difficulties in emotion regulation in their daily lives. Individuals high in maladaptive personality traits also paid more attention to COVID-19-related information and worried more about the consequences of the pandemic (crisis preoccupation).

# UNIVERSITY STUDENTS & MENTAL HEALTH

## XENIA - HIGHER EDUCATION INCLUSIVENESS INDEX. MEASURING AND MONITORING THE INCLUSION OF SEXUAL AND GENDER MINORITIES IN EUROPEAN UNIVERSITY CONTEXTS

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Universities are the primary educational agencies charged with promoting the well-being and developing the individual potential of young adults. XENIA: Higher Education Inclusiveness Index is a project funded by the European Erasmus+ program, with Center SInAPSi of the University of Naples Federico II in the role of leader of a consortium composed of five European countries. The final outcome of the Xenia project will be the development of an index that allows universities to measure their level of inclusion. The Xenia Index moves on a multiple perspective: (a) empirical perspective, along the five thematic areas (Institutional Aspects, Policies and Programs, Curricula, Support Services, Academic Life) and a set of objective indicators; b) subjective perspective, such as to capture the perceived level of inclusion; (c) aggregate perspective, the objective and subjective measures of inclusion taken together. By combining the results of the matrix and the survey, the index will capture any misalignment between expected and actual inclusion, identifying gaps and disconnects in practices and processes already in place.

## NOIBENE, A WEB-BASED INTERVENTION TO PROMOTE MENTAL HEALTH AMONG UNIVERSITY STUDENTS: COMPARING GUIDED WITH UNGUIDED SELF-HELP

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NoiBene is a web-based psychological prevention program for university students. The study compared the efficacy of NoiBene as a self-help intervention (NB-SH), where students carry out the program in autonomy, and as a guided self-help intervention (NB-GSH) that involves the guidance of a Tutor. 303 students were included in the study. Standardized questionnaires to measure mental health, emotional awareness, assertiveness, and transdiagnostic factors were administered at pre- and post-intervention. Participants also received a feedback questionnaire to evaluate the degree of satisfaction. A significant time effect was observed: results showed an improvement in emotional awareness and assertiveness, and a reduction in perfectionism, self-criticism, worry, rumination and experiential avoidance. Analysis also yielded a significant time x group interaction on perfectionism, rumination, self-criticism and experiential avoidance dimensions. Moreover, participants in the NB-GSH condition reported higher levels of satisfaction; also, this condition was characterized by a lower percentage of drop-out. In conclusion, NoiBene is effective with and without support. Future research should better investigate the role of the Tutor in contributing to the clinical utility of the intervention.

## PREDICTING PSYCHOLOGICAL DISTRESS OF UNIVERSITY STUDENTS DURING THE SECOND LOCKDOWN: THE ROLE OF ACADEMIC ENGAGEMENT AND GENDER DIFFERENCES

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Academic Engagement (AE) is a multidimensional, contextual and dynamic construct, that refers to positive and proactive positioning (Alrashidi, Phan & Ngu, 2016) with differences among genders (Kinzie et al., 2007). According to the SInAPSi model on AE (Freda et al., 2021), AE may be conceived as constituted by six dimensions, such integration between academic project and relational net. Moreover, CoVID-19 restrictions influenced students' AE and impacted on their' psychological distress (PD) (Hamza et al., 2021). This study aims at analysing students' PD, evaluating gender differences in PD and AE and exploring the role of AE in predicting levels of PD during the second lockdown. Participants were Italian university students (N=462) filled in an online survey including: the SInAPSi Academic Engagement Scale (SAES; Freda et al., 2021) and the Depression Anxiety Stress Scale (DASS-21; Bottesi et al., 2015). Results showed moderate levels of PD, which were significantly higher in female students. Women also integrated significantly more the academic project in their wider life project. Regression analysis showed that mostly all AE dimensions predicted PD. This study showed that AE could be an important resource for university students to prevent PD through ad hoc interventions.

## A 6 MONTHS FOLLOW-UP STUDY ON STUDENTS ATTENDING A UNIVERSITY COUNSELLING SERVICE

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Many studies supported the effectiveness of counselling service for students in reducing psychological distress. However, little is known about the stability of these changes over time and few studies have assessed the mid-long term impact of counselling interventions and their impact on academic performance. The aim of this study was to evaluate the effectiveness of a CBT counselling service at Milano Bicocca University in reducing psychological symptoms and improving the academic self-efficacy in university students with and without a clinical situation. The study involved 225 students, who filled out the Clinical Outcomes in Routine Evaluation-Outcome Measure, the Symptom Checklist-90-Revised and the Difficulties in Emotion Regulation Scale at the beginning and at the end of the intervention and completed a 6-month follow-up assessment. Results show that most of the students reported an overall improvement of their clinical condition and a reduction of the symptoms; furthermore, over 60% of the sample indicated a reliable change. Additionally, 47,1% (CORE-OM) and 35.7% (SCL90-R) of the subjects that were above the clinical cut-off at baseline are classifiable in the non-clinical population at follow-up.

## COVID-19 STRESSORS AND PSYCHOLOGICAL HEALTH CONDITIONS AMONG UNIVERSITY STUDENTS OVER TWO YEARS OF THE COVID-19 PANDEMIC: A REPEATED CROSS-SECTIONAL STUDY

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The study aims at comparing university students' perceived COVID-19-related stressors (Relationships and Academic Life, Isolation, Fear of Contagion) and psychological health over three times during the pandemic: April 2020-T1, April 2021-T2, April 2022-T3. COVID-19-related stressors predictivity of psychological disease was also evaluated three times. 567 students completed COVID-19 Student Stress Questionnaire and SCL-90-R (T1 n=197; T2 n=200; T3 n=170). Data revealed significantly higher levels of all COVID-19-related stressors from T1 to T2 and significantly lower levels from T2 to T3. Psychological disease increased from T1 to T2 but remained unchanged from T2 to T3. All COVID-19-related stressors predicted psychological disease at T1 and T2. At T3 Relationships and Academic Life retained its full predictivity, while Isolation lost predictive power with respect to Anxiety and Hostility, and Fear of Contagion lost predictive power with respect to all psychological disorders except Somatization and Phobic-Anxiety. Despite a significant reduction, the impact of COVID-19-stressor related to changes in relationships has enduring effects on students' psychological health and should be carefully considered to develop evidence-based interventions in the current post-pandemic period.



## WELL-BEING PROMOTION

## SUSTAINABLE DEVELOPMENT FOR FAMILIES: WHEN THE ENVIRONMENT IS “EMBEDDED” AT HOME

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Climate changes are among the most pressing problems humanity is facing nowadays, and both scientific and governmental organizations around the world are attempting to assess its potential impact at every level and propose solutions to it. Family studies have so far played a marginal role in this endeavor, compared to other psychological sectors. However, family influence and parental socialization practices represent a critical factor for the understanding of pro-environmental behaviors especially on the adolescents (Grønhøj & Thøgersen, 2017). The present study based on Systemic Family Therapy move forward and intends to propose a theoretical and methodological analysis about the role of family in the choice of pro-environmental behaviors and the identification of adaptation and coping strategies at the family level, showing preliminary results about the development of a questionnaire.

## HELPING THE HEALTHCARE PROFESSIONALS TO SEE THE INVISIBLE: MASCOD - MULTIDIMENSIONAL ASSESSMENT OF SUBJECTIVE COGNITIVE DECLINE

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Subjective Cognitive Decline (SCD) is a subclinical cognitive impairment which is only subjectively experienced as disturbing, and it can potentially evolve into dementia over time. Thus, it turns into a silent burden for the healthcare sector. To our knowledge, there are only few tools to investigate subjective memory complaints, neglecting other SCD manifestations. This paper presents a new screening tool to assess risk factors and different subclinical manifestations of SCD. It comprises three parts: Section A investigates biomarkers, neurologic and medical comorbidities, other risk factors for cognitive decline; Section B explores memory and executive manifestations of SCD in daily life; Section C assesses the presence of anxious/depressive or distressing symptoms to make a differential diagnosis. It unveils four increasing risk levels of developing a severe cognitive impairment over time; it provides a follow-up version too. Currently, this test is under validation; preliminary results showed that the convergence level with standard neuropsychological evaluation in detecting true positive and true negative cases is 69,24%. Thus, it can help the professional to tailor the care path, improving the patient's satisfaction and the professional's work experience and efficacy too.

## HEALTH-WELLBEING PROMOTION IN THE PROCESS OF AGEING: AN INTERVENTION MODEL BORDERING ON CLINICAL PSYCHOLOGY

*Luciano Peirone*

The practice of clinical psychology tends increasingly to dialogue with health psychology. Of particular importance is the action of psycho-promotion exercised with “elderly” subjects in the following specific model of intervention. UNITRE (University of the Third Age) is, from almost fifty years, an operational experience of LLL (Lifelong & Lifewide Learning) in close interaction with AHA (Active & Healthy Ageing). It is an explicit example of community policy and an implicit psychosocial laboratory including many perspectives moved by health psychology towards important goals: promoting an active, successful and effective ageing, based on an inclusive psycho-socio-cultural model. There is a strong impact of “culture” in a “timeless age”: continuing education (courses, laboratories, encounter groups, conferences) is an optimal situation to carry out a psychological enhancement for users in the third age. Applying methods, techniques and tools derived from clinical and positive psychology, the concept of Well-Being finds a concrete and practical outcome: various skills (cognitive, emotional, relational, socializing) improve the human capacity “to buy years” with a positive existential condition. The psychological research proves that “making culture means producing health”.

## WELLBEING, POST-TRAUMATIC GROWTH AND BURN-OUT IN HEALTH WORKERS DURING THE PANDEMIC

*Chiara Ruini (Dipartimento di Psicologia, Università di Bologna), Rossano Mas (Fondazione Maharishi), Patrizia Tessarin (Fondazione Maharishi)*

The COVID-19 emergency had important consequences on the mental health of health workers due to exposure to highly stressful situations. This investigation aims at exploring risk and protective factors of health workers' mental health during the pandemic. 173 individuals were assessed for positive mental health, psychological distress (anxiety, stress and depression), burnout, post-traumatic growth and fear of death. Based on their positive mental health levels, they were divided into the three categories of mental health: languishing, moderate mental health or flourishing. The results showed that flourishing mental health (more than 50% of the sample) was associated with lower levels of psychological distress and burnout and with higher levels of post-traumatic growth. In addition, depression and work-related burnout were significant predictors of mental health. This investigation documented that the majority of health workers maintained good mental health during the pandemic. However, other professionals showed impaired well-being and higher levels of psychological distress. Targeted interventions for promoting well-being and personal growth might have a crucial role for preventing burn-out and poor mental health in health workers

## ARCHITECTURE ORIENTED TOWARDS THE IMPROVEMENT OF PRISONERS' AND PRISON WORKERS' WELL-BEING. A RESEARCH STUDY IN THE COMO PRISON

*Antonia Sorge (Università Cattolica del Sacro Cuore), Stefania Balzarotti (Università Cattolica del Sacro Cuore), Emanuela Saita (Università Cattolica del Sacro Cuore)*

The risk of suicide, self-harm and mental health problems is very high among prisoners and low levels of quality of life are influenced by factors like prisons environmental conditions. Despite widespread recognition of the problem, in Italy few studies have addressed this issue. To fill this gap, the present work will assess the physical-psychological conditions of the Como prison's inmates and staff. About 75 participants (prisoners and prison workers) will be asked to navigate in current architectural environments through virtual reality. Physiological data such as heart rate will be recorded; psychological variables will be evaluated by means of self-report questionnaires. Data will be collected starting from June 2022. Consistent with prior international studies, we expect to observe psycho-physiological changes as a function of multiple factors including constrained environments and poor visual stimulation. The collection of data highlighting the negative effects of old and ruined architecture on prisoners' mental health could provide a solid scientific starting point to implement architectural changes. Improving environmental quality could lower stress levels and internal tension, reducing the risk of critical events and increasing the working wellbeing of prison staff.

## YOUTH'S ISSUES

## SOCIAL WITHDRAWAL IN ITALIANS ADOLESCENTS: INITIAL UNDERSTANDING OF THE HIKIKOMORI PHENOMENON

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As a potential signal of functional impairment and mental disorders, social withdrawal, called Hikikomori, is increasingly becoming a problematic phenomenon worldwide. Notwithstanding, research is still limited outside Japan. The present study aimed to expand scientific knowledge on Hikikomori and its characteristics in a western sociocultural context. Three hundred seventy-nine Italian students ( $M_{age}=13.28$ ,  $SD=1.69$ ; range=11-16) completed a booklet of self-report questionnaires evaluating parental bonding, self-esteem, emotion dysregulation, and body-related constructs (shame and emotional investment) and disordered eating. Of the sample, 155 (40.9%) met the cut-off for the Hikikomori's risk (HR). Multivariate comparison between HR and no-HR groups was significant ( $\lambda=.941$ ,  $p=0.43$ , partial  $\eta^2=.060$ ). After controlling for sex and age, emotion dysregulation, bodily shame and body emotional disinvestment were associated with HR. Findings suggest that isolated adolescents show less psychological well-being. Thus, identifying factors associated with HR is essential for early recognition and intervention to reduce the negative consequences of such a hidden epidemic.



## FEAR OF MISSING OUT AND PROBLEMATIC USE OF SOCIAL NETWORK SITES: THE ROLE OF 'VIRTUAL FRIENDS AND SELF-PRESENTATION TYPES

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Research suggests that social network use can be problematic (PSNSU), and the fear of missing out (FoMO) is one of its major components. FoMO implies a social comparison, and often involves a feeling of inadequacy in terms of self-concept and sensitivity to the behavior of others. Those affected might be more inclined to manipulate their online self-presentation seeking for reassurance from others. The aims of our study were to examine the relationships between self-concept clarity (SCC), bridging social capital (BSC), FoMO, real, ideal, and false self-presentation and PSNSU, and to explore the mediating role of FoMO and the three types of self-presentation respectively between BSC and PSNSU and SCC and PSNSU. A total of 1287 SNS users ( $n=922$ , 67 % females; Mage = 24.34 years, SD = 3.99) completed a questionnaire comprising the Bergen Social Networking Addiction Scale, the Self-Presentation on Facebook Questionnaire, the FoMO scale, the Internet Social Capital scale, and the Self-Concept Clarity scale. Findings evidenced that beside their direct effect on PSNSU, BSC and SCC had also an indirect effect on PSNSU through FoMO and false self-presentation. This study contributes to the literature about FoMO and PSNSU by considering the role of core behaviors on Social Network Sites.

## PERCEPTION OF CYBERBULLYING AMONG ITALIAN JUVENILES

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Young people who suffer from cyberbullying develop psychopathological symptoms of anxiety, depression, and social phobia that can lead to extreme acts, such as suicide. The pressure, the sense of isolation, and helplessness experienced by cyber-victims also affect their family and the school context. Cyberbullying is acted through digital tools, it is often anonymous, and aims to destroy and psychologically humiliate the victim. There are various forms of cyberbullying that involve different reactions and consequences. However, few studies have focused on adolescents' perception of cyberbullying. Youths often engage in aggressive behaviors, ignoring the feelings and reactions of the victims. Based on these considerations, our article aims to provide a general overview of the spread of the phenomenon and to understand the various types of cyberbullying and its consequences on victims. We will also illustrate a brief evaluation conducted in Italian schools investigating the perception of cyberbullying in a sample of 600 Italian adolescents (11–14 years old). Our work aims to investigate the cognition and the personal perception of youths about cyberbullying and its consequences and to promote educational interventions within and outside the context of school.

## IS THE HUMAN FIGURE DRAWING TEST USEFUL TO IDENTIFY EXPERIENCES OF CHILD MALTREATMENT AND DISSOCIATIVE SYMPTOMS? PRELIMINARY FINDINGS

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Previous research investigated whether specific characteristics of drawings may represent indicators of past traumatic experiences. However, the relationship between performance on the Human Figure Drawing (HFD) test and dissociation has been scarcely explored. The current study aimed to examine the relationships between indices of HFD test, experiences of child maltreatment and dissociation. A sample of 102 adults (52 females, 51%) aged between 19 and 76 years old ( $M=31.93$ ;  $SD=12.83$ ) was administered the HFD test and self-report measures assessing child maltreatment and dissociation. Partial correlations were computed to examine the associations between scores on HFD test indicators, types of child maltreatment, and dissociation, controlling for socio-demographic variables. Results showed that alterations in the structural property of the HFD test and the omission or distortion of specific body parts were associated with child maltreatment and dissociation. These findings suggest that the HFD test might be used to inform the psychological evaluation of dissociative symptoms and childhood experiences of abuse and neglect.

## PERFECTIONISTIC CONCERNS PREDICT ACADEMIC MOTIVATION IN SPECIFIC LEARNING DISABILITIES

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Specific Learning Disorders (SLDs) are characterized by persistent difficulties in reading, writing, and/or mathematics resulting in impairment of academic performances. Although students referring SLDs may report low motivation that typically contributes to academic failures, no study has examined the interrelationship between motivation, academic performance and other psychological predictors within this population. To this aim, 177 undergraduates with SLDs ( $M_{age} = 21.13 \pm 2.67$ ) completed the Vinegrad Plus, Academic Motivation Scale (AMS) and Multidimensional Perfectionism Scale. Five hierarchical regressions assessed whether demographics (Step 1), difficulties in everyday/academic tasks (Step 2) and perfectionism aspects (Step 3) predict AMS subscales. Results showed that Socially Prescribed Perfectionism (SPP) positively predicted Amotivation ( $\beta = .338$ )\* Extrinsic Motivation ( $\beta = .470$ )\*\* and Introjected Motivation ( $\beta = .317$ )\*, which was also marginally predicted by Self-Oriented Perfectionism ( $\beta = .199$ ;  $p = .05$ ). Findings suggest that perfectionistic concerns may contribute to the lack of motivation and external locus of causality in SLDs, encouraging the evaluation of protocols focused on the reduction of perfectionistic pressures in those students. Note: \* $p \leq .01$ ; \*\* $p \leq .001$

# ADDICTION

## RESEARCH ON THE PROBLEMATIC USE OF THE INTERNET AND SOCIAL MEDIA: SOME INSIGHTS AFTER 20 YEARS AND FUTURE DIRECTIONS

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Over the past 20 years, the interest in the impact of internet use has skyrocketed, and concern is growing about whether problematic use of the internet (PUI) constitutes an addiction. However, the conceptualization of PUI remains a challenge, and its inclusion in a classification system is not yet fully supported. Several models have proposed possible mechanisms involved in PUI and problematic use of social media (PUSM), and multiple self-reports have been developed. The diversity of theoretical frameworks and instruments currently hinders standardized assessment procedures across studies and, in turn, their comparability. The present overview will present the current status of the conceptualization and assessment of both PUI and PUSM, in order to critically discuss the existing fragmentation and the need to achieve conceptual convergence. Suggestions for future directions will be also provided, i.e., define diagnostic criteria by bottom-up and top-down processes, and develop a psychobiological model including higher-order mechanisms involved in PUI and not in other psychopathological conditions (e.g., the multiple available internet-related cues and outcomes that may lead to parallel forms of associative learning; probabilities of obtaining internet-related reinforcements).

A 12-MONTH RANDOMISED, DOUBLE-BLIND, CONTROLLED, MULTICENTRE TRIAL COMPARING CHANGES IN CIGARETTE CONSUMPTION AFTER CLINICAL PSYCHOLOGICAL TAILORED MOTIVATIONAL INTERVIEWING AND SWITCHING TO HIGH OR LOW NICOTINE STRENGTH E-CIGARETTES IN SMOKERS WITH SCHIZOPHRENIA SPECTRUM DISORDERS: PROTOCOL FOR THE GENESIS TRIAL

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Smoking prevalence among people with mental disorders 2 to 4 times higher than in the general population and they also have high rates of morbidity/mortality from smoking. Progress in reducing smoking prevalence in people with mental health diagnoses has been very slow. There is a pressing need for alternative and more efficient interventions to reduce or prevent morbidity and mortality in smokers with schizophrenia spectrum disorders. 258 smokers will be recruited, a randomized, double blind trial comparing effectiveness, safety and subjective effects between 5% and 1.5% nicotine e-cigarette plus psychological tailored motivational interviewing. The primary endpoint will be the continuous quit rate at 6-month. This will be the first trial comparing psychological motivational interviewing and high nicotine e-cigarette 5% with psychological motivational interviewing plus low nicotine e-cigarette 1.5% in term of reduction in cigarette consumption, adoption, acceptability, tolerability, and tobacco harm reduction potential. This knowledge can contribute to a better understanding of e-cigarette with high nicotine content combined with psychological motivational interviewing as a pragmatic alternative to tobacco smoking with the possibility of significant health gains.

## A RANDOMIZED TRIAL COMPARING LEVEL OF EFFICACY, TOLERABILITY, AND ACCEPTABILITY OF HEATED TOBACCO PRODUCTS AND CLINICAL PSYCHOLOGICAL TAILORED MOTIVATIONAL INTERVIEWING VS. REFILLABLE ELECTRONIC CIGARETTES AND PSYCHOLOGICAL TAILORED MOTIVATIONAL INTERVIEWING FOR CIGARETTES SUBSTITUTION: THE CEASEFIRE TRIAL

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In Italy, one in four adults were still regular smokers in 2017. Increasing use of combustion-free delivering nicotine technologies for cigarette substitution may accelerate the current downward trends in smoking prevalence. We have designed a prospective study to compare changes in cigarette consumption and adoption rates among smokers randomized to either HTPs or ECs combined with psychological tailored motivational interviewing. Quality of life, risk perception and harm reduction potential were compared. 220 smokers, not motivated to quit, were randomized into a 12-weeks open label, non-inferiority trial comparing study outcomes from HTPs vs. ECs use combined with psychological tailored motivational interviewing. In IQOS psychological tailored motivational interviewing plus HnB group at the 12-week study visits, 39.1% people had quit smoking. In psychological tailored motivational interviewing plus JustFog EC group at the 12-week study visits, 30.8% people had quit smoking. Changes in quality of life as assessed by EQ-VAS showed a positive changes between BL and 12-week follow-up (visit 6). The Perceived Risk Instrument showed a stable low to moderate risk perception for both study products compared to high to very high risk perception for the combustible cigarette.



## THE EFFECT OF ALEXITHYMIA, DISSOCIATION, AND FAMILY COHESION ON COMPULSIVE ONLINE SHOPPING: A MODERATED MEDIATION

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The expansion of e-commerce has opened up the possibility of new online buying experiences, extremely fast, personalized and immersive. While this may have some benefits for buyers, it can also increase the risk of disease outcomes for vulnerable people. The present study aimed to explore the role of some protective and risk factors for Compulsive Online Shopping, with a specific focus on the influence of Alexithymia, Dissociation, and Family Cohesion. A sample of 222 Italian participants (Women = 166; Mage = 32.3, SD = 12.53) completed the Compulsive Online Shopping Scale, 20-Items Toronto Alexithymia Scale, Dissociative Experience Scale-II, Family Adaptability and Cohesion Evaluation Scales – IV. Our findings showed a significant total effect in the relationship between Alexithymia and Compulsive Online Shopping ( $\beta = .48, p < .001, LL = .0264-UL = .0431$ ). Dissociation partially mediated this relationship, and Family Cohesion moderated the association between Dissociation and Compulsive Online Shopping ( $\beta = .37, p < .05, LL = .0011-UL = .0175$ ), such that as Cohesion increased, the effect of Dissociation on Compulsive Online Shopping decreased. Important implications for clinical and preventive interventions may emerge from these data.

## **ATTACHMENT ISSUES**

## THE ROLE OF INTERPERSONAL DEPENDENCY AND ATTACHMENT STYLE IN SMARTPHONE AND SOCIAL NETWORK USE

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Smartphones and Social Network Sites (SNS) play an increasingly central role in everyday life, facilitating the implementation of various tasks and fostering interpersonal connections. Also considering the addictive potential of such devices (Billieux, 2012), it is necessary to clarify the psychological patterns leading to less adaptive consumption. This study proposed a novel approach to the topic, combining the literature that suggests a self-regulatory function of smartphones and related applications (Hao & Jin, 2020), with an interpersonal stance. We hypothesized that adult attachment style and interpersonal patterns generalize to the emotional bond with the device, interacting with other relevant psychological correlates, to affect smartphone and SNS consumption. 341 nonclinical adults filled in the Attachment Style Questionnaire, the Relationship Profile Test, the Rosenberg Self-Esteem Scale, the Toronto Alexithymia Scale, the Young Adult Attachment to Phone Scale, and the Social Network Intensity and Social Network Access via Mobile phone Applications. The proposed model was tested through path analyses and findings support the hypothesis regarding the influence of interpersonal functioning styles in the relationship of the individual with their smartphone and use of SNS.

## THE ROOTS OF SELF-CRITICISM: A SYSTEMATIC REVIEW ON ITS LINKS WITH CHILDHOOD TRAUMA

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Recently, a growing attention is paid to the set of processes identified as “self-criticism” and its potential transdiagnostic value (Löw et al., 2020). Several contributions referred to its developmental roots and especially to the role of trauma and attachment. However, the complexity of these constructs led to a scattered knowledge that fails to provide a comprehensive understanding of the topic. To bridge such gaps, a systematic review on the relationships between trauma, attachment and self-criticism was performed following the PRISMA guidelines. 8732 records were retrieved from five databases. Screening led to the inclusion of 312 contributions. Most of these investigated the relationships between trauma and self-criticism whereas only 68 studies examined the role of attachment. Literature was characterized by heterogeneity and a lack of clarity in the definition and operationalization of self-criticism. Studies suggest a different predictive role of trauma on self-criticism according to the type of experiences. This review indicates the need for a stronger theoretical framework driving future research that should clearly define the construct of self-criticism, differentiate between types of trauma and investigate the role of mediators such as attachment-related processes.

## ACTIVATION STYLES AND CLINICAL APPLICATIONS OF THE ‘TWO-DIMENSIONAL MODEL OF ACTIVATION OF THE BEHAVIOURAL SYSTEMS’

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The two-dimensional model of activation of the behavioural systems identifies four prototypical activation styles of the systems by combining two continuous dimensions: hyperactivation and deactivation. By applying this model to the attachment, the caregiving, the power, the sex and the cooperative system, the following styles can be distinguished. In the functional style both dimensions are low, and the activation of the system is appropriate. In the hyperactivated style, hyperactivation is high while deactivation is low, and the system is overly activated. In the inhibited style, hyperactivation is low while deactivation is high, and the activation of the system is decreased. In the problematic style, both dimensions are high, and the activation of the system is chaotic leading to higher risk for emotional problems and psychopathology. The present model describes the activation styles both in terms of behavioral strategies and semantic representations. Representing the activation styles of the patient allows to better understand mechanisms underpinning emotional disorders. In particular, finding the presence of the problematic activation style can be important to detect behavioural activations potentially undermining the therapeutic process.

# **CHANGES TO INTERVENTION'S CONTEXT THROUGHOUT THE PANDEMIC**

## EMOTIONS MATTERS: SUBJECTIVE EXPERIENCES OF COVID-19 PATIENTS DURING THE PANDEMIC WAVES

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The several waves of COVID-19 had different characteristics and consequences. The subjective experiences of these waves could be potentially heterogeneous too. Thus, an ad hoc questionnaire has been developed to collect emotions on different phases of pandemic reported by patients contracting the disease during the first, second and third waves. Overall, 104 outpatients from northern Italy who underwent cardio-respiratory check-up follow up after recovering from COVID-19, have been asked to provide one to three emotions connected to: a) the outbreak of the pandemic in Italy, b) their own disease, c) the present time (follow up after 3-12 months). They were also asked to state their barriers and coping resources. Qualitative analyses through the Plutchik's Wheel of Emotions model are currently in progress. Preliminary data unveil feelings of worry and fear, specifically during the first wave, and the outbreak of the pandemic and during the disease. The most reported resources described are family and hobby (e.g. garden). Unveiling the emotional and psychological experiences of COVID-19 patients can provide the healthcare professionals with further understanding for a holistic and effective taking care, alleviating the patients' traumatic experience and professionals' burden.

## THE LONGITUDINAL IMPACT OF COVID-19 PANDEMIC ON PRESCHOOLERS' PSYCHOLOGICAL FUNCTIONING: THE ROLE OF PRE-EXISTING MATERNAL PSYCHOPATHOLOGICAL RISK

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COVID-19 pandemic has been widely recognized as a risk factor for families psychological wellbeing. However, little is known on its longitudinal impact on children emotional and behavioral functioning, also exploring the effect of pre-existing maternal psychopathological risk. A sample of 380 mothers and their preschooler children was recruited from the general population. Assessment took place over three points (every six months): pre-pandemic period (T1), first wave's peak (T2), after first wave, during contagions declining. The SCL-90-R was used to assess maternal psychopathological risk at T1, the CBCL 1,5-5 to assess offspring's emotional/behavioral functioning at T1, T2 and T3. Results showed that, from pre-pandemic (T1) to pandemic period (T2), emotional/behavioral functioning of children with clinical mothers (at T1) significantly worsened, while that of children with non-clinical mothers showed a stable trend. Also, from pandemic peak (T2) to its decline (T3), both groups of children showed an improvement. Given the lack of studies on the field, this study deepened knowledge on the longitudinal impact of the interplay between COVID-19 pandemic and parents' wellbeing on children psychological functioning.



## PATIENTS' PERSPECTIVE ABOUT THE TRANSITION TO ONLINE PSYCHOTHERAPY DURING COVID-19 PANDEMIC

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Since the spread of the COVID-19 pandemic, the research explored the specific challenges and obstacles of online group psychotherapy, but investigations seem not to give enough attention to the patients' perspective about the transition to online psychotherapy. This study aimed to explore the experience of 39 patients who continued psychotherapy in the online setting during the period of restrictions due to the pandemic. Through an online survey, a structured questionnaire with open answers investigated the following topics: setting online, effectiveness, psychotherapy relationship, specific group dynamics of online psychotherapy. The answers were analysed by means of Consensual Qualitative Research, Modified version (CQR-M), an inductive method that allows analysing large, simple and relatively brief written answers. In the online setting patients perceived the lack of corporeality and the missing of a shared physical space, an enriched representation of the therapist and the activation of new topics not related to the pandemic. The results showed that the transition to online therapy has meant for the patients an adaptation, but at the same time, it allowed the discovery of new aspects of the therapeutic relationships.

## GROUP PSYCHO-EDUCATIONAL INTERVENTION TO SUPPORT PATIENTS RECOVERED FROM COVID-19 INFECTION

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Common psychological features emerged in the uncomfortable condition of patients with previous COVID-19, such as traumatic experience and disturbed emotionality. A group psycho-educational intervention as part of the “Post COVID-19 health-surveillance” multidisciplinary protocol was proposed to all Italian-speaking patients formally discharged from a public hospital and physically recovered from COVID-19 infection. Two homogeneous by age groups of 4-7 participants and conducted by 2-trained psychologists were established. Intervention foresaw 7 weekly group-sessions and a 3-months later follow-up. Group-sessions were structured on thematic modules, with a main topic (e.g., COVID-19 experience, cognitive restructuring, coping strategies...) and specific tasks. The aim was to strengthen the functional adaptation and emotional regulation, and improve self-efficacy in a group-setting in which to rediscover social support. Participation was voluntary and procedures were in accordance with ethical legislation. Data were gathered through recordings and anonymous verbatim transcripts of group-sessions carried out between April and September 2021 in an area of the hospital which ensured privacy. Analyses were conducted using T-LAB. Final results will be presented in the congress context.

## COVID-19-RELATED STRESSORS AND ICTS USE AMONG UNIVERSITY STUDENTS: RISK AND PROTECTIVE FACTORS FOR ANXIETY AND DEPRESSION

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Although the COVID-19-emergency is slowly weakening globally, the drastic changes imposed (including the massive use of Information and Communication Technologies-ICTs) are expected to have enduring effects on mental health. Within the branch of research evaluating the impact of pandemic on university students' psychological health, this study aimed to explore main and mediating effects of COVID-19-related stressors (Relationships and Academic Life, Isolation, Fear of Contagion) and ICTs use dimensions (ICTs-Overuse, Working-from-Home-Overload, Ease-of-Use, Techno-Sociality) on Anxiety and Depression reported by 344 university students. Hayes-PROCESS was used to test main/mediating effects. Findings suggested that ICTs-Overuse and Working-from-Home-Overload significantly exacerbated perceived stress related to Relationships and Academic Life and Isolation, resulting in higher levels of Anxiety and Depression. Conversely, Ease-of-Use and Techno-Sociality indirectly enhanced students' psychological health by decreasing perceived stress related to Relationships and Academic Life. The study highlighted key risks but also key resources able to counteract perceived stress related to the challenges imposed by the pandemic in students' relational life.

# HEALTH PSYCHOLOGY

## CLINICAL MANIFESTATIONS AND POTENTIAL PREDICTORS OF FATIGUE AND MULTIPLE SCLEROSIS: A PILOT STUDY

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Fatigue is a common symptom observed in  $\approx 70\%$  of patients affected by Multiple Sclerosis (MS). Accordingly, the present study aims to detect the factors associated with MS diagnosis and the presence of fatigue, and examine the relationships between neuropsychological and neurological indices.  $N=121$  consecutive outpatients recruited from Bari University Hospital, 89 of whom diagnosed with MS, underwent clinical interview, neuropsychological (es. RBR-n; BDI; STAI I-II; FSS) and neurologic examination, CSF oligoclonal banding, and magnetic resonance imaging. Logistic regression allowed for predictive analyses, revealing an association between the number of oligoclonal bands, MRI brain lesions, EDSS and FSS (fatigue) scores and the actual diagnosis of MS (predictivity=84%). Scores at EDSS, PASAT-3 (attention and concentration) e BDI (depression) were associated with the presence of fatigue (predictivity=86%). Among MS patients, significant correlations emerged between FSS and EDSS ( $r=.35$ ,  $p=.001$ ), FSS and brain lesions ( $r=.23$ ,  $p=.02$ ), FSS and MS relapses ( $r=.24$ ,  $p=.016$ ). Additional significant relationships concerned the SRT (consistent long-term retrieval) and duration of disease ( $r=.20$ ,  $p=.027$ ), SRTC and EDSS ( $r=-.19$ ,  $p=.032$ ), SRTL (long-term retrieval) and EDSS ( $r=-.21$ ,  $p=.019$ ).

## SUICIDE AMONG CANCER PATIENTS: META-ANALYSES OF OBSERVATIONAL STUDIES

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Available meta-analytic evidence suggests an increased risk of suicide among cancer patients, although most of the reports focused on the sole suicide death (SD) outcome. The present meta-analysis aimed at assessing the prevalence, the incidence and the risk rates of SD, suicide attempt (SA), and suicidal ideation (SI) among cancer patients. Systematic search up to April 2021 of observational studies documenting cancer and suicide outcomes associations. Pooled prevalence estimates, incidence rates, odd ratios (ORs), risk ratios (RRs), hazard ratios (HRs) of SD, SA, and SI were computed according to the random-effects model. SD prevalence underwent cumulative and subgroup analyses for different variables. Risk estimates underwent sensitivity analyses for study design. Thirty-nine studies were included for prevalence and risk meta-analyses. They suggested higher risk of SD based on HR, SA based on OR and HR, and SI based on each measure recorded among cancer patients versus controls. OR and RR of SD was not significant. Pooled prevalence rates of SD, SA and SI among cancer patients were 1.9%, 1.4%, and 9.1%, respectively. Cancer patients have higher prevalence rates of suicide outcomes compared to the general population.

## ORGAN DONATION IN ITALY: A STUDY OF CULTURAL REPRESENTATION THROUGH EMOTIONAL TEXT MINING

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Organ donation is the first step in the life-saving treatment of transplantation. Italy tried to arise its donors through many projects (e.g., through the renovation of ID) but with low results. Different cultural facets can affect the final number of effective donors. Aiming to analyze the Italian cultural representation of organ donation, we collected all the articles (N=846) containing the keyword organ donation in the time gap 2001-2021 in the two major Italian newspapers . (Corriere della Sera and La Repubblica). Then we analyzed this final corpus using Emotional Text Mining (ETM). Analysis showed three factors and four clusters of representations: 'The life-saving product', which reflects the medical final aim of the process; 'Organ donation for the community, where there are no donors or transplanted patients, but the organ donation is linked to all the citizens; 'The Death', describing the death and dying related to organ donation in a paralyzed view; 'The Italian promotional model', where the promotion of organ donation remains anchored to past communicative models. The research highlighted important cultural facets, in particular the strong presence of death. These results can help to create more focused campaigning for the general population.

## CHARLES BONNET SYNDROME: CHARACTERISTICS AND PREVALENCE IN A POPULATION OF ADULTS WITH VISUAL IMPAIRMENT

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Patients with chronic degenerative eye diseases experience seeing colored lights, flashes, objects, distorted faces, animals and landscapes. These are not psychotic, typically multisensory hallucinations, but due to Charles Bonnet syndrome (CBS). CBS can compromise the mental health, quality of life and rehabilitation of visually impaired. Patients may feel confused, anxious, angry, paranoid. Often hallucinations are not reported to family members and caregivers for fear of being labeled psychotic. The aim was to define the prevalence and characteristics of CBS in a visual rehabilitation center. 282 patients with age-related macular degeneration. 51 patients (18% of total sample), reported visual hallucinations: 35% geometric figures, 29% animals, 35% deformed faces and 18% landscapes. 41% of patients with CBS present with symptoms of Anxiety and depression. None of participants was aware of CBS due to lack of information from the ophthalmologist. In accordance to the prevalence of CBS reported by our results, it would be important to spread the knowledge about CBS to health professionals in order to be able to inform and reassure patients, with chronic and degenerative eye diseases, that it is not a psychiatric pathology



## **NEW MODELS AND PREDICTION**

## THE PSYCHOLOGICAL FUNCTION OF FICTION IN THE CONSTRUCTION OF GENDER IDENTITY: NEW PERSPECTIVES

*Eugenia Treglia (Università degli Studi di Cassino e del Lazio Meridionale), Rosella Tomassoni (Università degli Studi di Cassino e del Lazio Meridionale)*

This paper intends to reflect on the psychological functions of narration, conceived as a powerful cultural and transformative agent capable of modeling individual behavior and identity (Bruner, 2004). It represents a vehicle of concepts that reinforce individual thought (Piaget, 2000) in the vast system of collective thought (Vigotsky, 2010) which is unconsciously assimilated by virtue of the absorbing capacity of the infantile mind (Montessori, 1999). The narrative text, in particular, is the result of a possible structuring of reality according to paths that make it thinkable and assimilable (Barbieri, 2007). Even our gender identity is not given a priori but rather seems to be the result of a process of internalization of the cultural symbolic systems of one's own environment (Musi, 2008). The condition of social oppression of women has determined for centuries the impossibility of creating alternative symbolic models capable of competing with and supporting the male ones (Ulivieri, Biemmi, 2011), but the emancipation process still underway is leading to new narratives of the female that determine a system of positive identifications and multifaceted identity articulations, which will be investigated here from a psychodynamic perspective.

## DEVELOPMENT AND VALIDATION OF THE AROUSAL MODULATION MODEL QUESTIONNAIRE (AMMQ)

*Fabio D'Antoni (Azienda Sanitaria Universitaria Friuli Centrale), Esterina Pedone (Istituto di Formazione in Psicoterapia Sistemica, Familiare e Relazionale Naven)*

The biphasic response to trauma is characterized by the alternation of hyper-arousal defensive responses (e.g., fight/flight reactions, intrusive thoughts) and hypo-arousal responses (e.g., numbing, dissociative tendencies). According to the theoretical/clinical model of Sensorimotor Psychotherapy and the Polyvagal Theory, the present study aims to develop and validate a self-report questionnaire assessing these autonomic arousal oscillations in adults. This instrument, due its trans-diagnostic feature, may be usefully employed in both clinical and research fields. The first version of the questionnaire was tested on a sample of 249 healthy adults. The resulting 5-factor model (32 items) showed appropriate “fit” indices (RMSEA = 0.06; GFI = 0.81; TLI = 0.86). The Tolerance window factor was negatively correlated with the Fight, Flight, Freezing and Feigned death factors ( $r < -0.49$ ), and with several psychological dimensions of the Psychological Wellbeing (PWB) Scale ( $r > 0.51$ ). Internal consistency measured using the categorical omega coefficient was good for all factors (all  $\omega > 0.81$ ). Further studies on the validation of the questionnaire are ongoing on a larger sample of adults including people with psychopathology.

## INFORMAL CAREGIVERS, THE HIDDEN PATIENTS: EXPLORING PSYCHOLOGICAL ISSUES WITH A NETWORK ANALYSIS APPROACH

*Anna Panzeri (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Cecilia Scalavizzi (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Informal caregivers (IC) are defined as the 'hidden patients' because of their burdensome and challenging role, affecting their psycho-physical health. However, too little attention is given to the ICs psychological issues. This study aimed to explore and understand the complex relationships patterns among psychological constructs in a sample of Italian IC through Network Analysis (NA), a novel statistical approach. 157 IC (94% females, age  $48.7 \pm 12$ ) filled self-reports about caregiver burden (CB), anxiety, depression, intolerance of uncertainty (IU), worry, emotion-regulation, coping strategies, and social-support. The NA graph showed two nodes aggregations: the protective and vulnerability ones. Among the vulnerabilities, CB had the highest closeness (1.2) and betweenness (1.8), also depression, anxiety, IU and worry were strongly associated. Among the protective constructs, emotional reappraisal, social-support, and coping strategies were strongly associated. In conclusion, NA identified the most important constructs involved in informal care and suggested relevant intervention targets: acting on the psychological risk-factors may decrease carers' psychological issues, whilst acting on the protective constructs may promote better psychological health in IC.

## THE PLAN FORMULATION METHOD FOR COUPLES (PFMC): DESCRIPTION AND FIRST STEPS TOWARD THE EMPIRICAL VALIDATION

*Martina Rodomonti (Sapienza Università di Roma)*

The aim of this presentation is to show the first reliability data of the Plan Formulation Method for Couples (PFMC), a procedure for formulating the case, planning, and monitoring couple therapies according to Control-Mastery Theory. We hypothesized that when couples are looking for couple therapy, they have an unconscious couple's plan, which includes the couple's goals; the pathogenic beliefs; the individual and couple's traumas; the vicious and virtuous relational circles; and the relational insights. Our study involved 15 couples. Four raters independently formulated each couple's plan based on the first three sessions following a standard procedure, and we calculated the intraclass correlation for pooled judges' ratings. For a subsample—three couples who pre- and posttreatment had completed the Dyadic Adjustment Scale (DAS) and the Outcome Questionnaire-45.2 (OQ-45.2)—the compatibility of the therapists' interventions with the couple's plans was assessed. The relationship between these plan-compatibility scores, DAS and OQ-45.2, was assessed. The results showed excellent interjudge reliability for each couple's plan formulation (average ICC = 0.82) and suggested that therapists' interventions compatible with couple's plans could help partners achieve good outcomes.

## **PROFESSIONALS AND INTERVENTIONS**

## CULTURAL HERITAGE AND POST-TRAUMATIC PROCESSES. EXPLORING LONG-TERM RISKS FOR CULTURAL OPERATORS ACTING IN POST-DISASTER SETTINGS

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Cultural heritage is an expression of identity for any community, but also the field of work of professionals acting in post-disaster settings. The objective of the study is to analyze the emotional impact of the sight of the ruins of the cultural heritage on cultural operators in order to explore potential long-term risks for their mental health. A group of cultural operators who intervened after the 2016 Central Italy earthquake, compared to a group of emergency psychologists and of victims exposed to the same disaster, completed a semi-structured interview developed ad hoc for this purpose, together with self-reports evaluating personal and clinical dimensions. Kruskal-Wallis test was used to analyze data. The unpleasant emotions triggered by the sight of the ruins of cultural heritage were higher in cultural operators and victims than in emergency psychologists. Images of immovable properties (i.e., palaces or churches) aroused the most negative and intense emotions, transversely to groups. An emotional impact gradient of the sight of the ruins of cultural heritage emerged, with cultural operators showing a high risk of overwhelming emotions that should be taken in serious account. Further research in larger samples is needed.

## PATIENTS' TESTING ACTIVITY IN PSYCHOTHERAPY, THERAPEUTIC ALLIANCE AND TREATMENT OUTCOME

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According to Control-Mastery Theory (Gazzillo, 2021; Silberschatz, 2005; Weiss, 1993), people come to therapy with an unconscious plan to overcome their pathogenic beliefs. The primary way patients work in therapy to disconfirm their pathogenic beliefs is by testing them in the therapeutic relationship. Previous studies suggest that therapist's pro-plan responses to patient tests are predictive of patient's within-session progress (e.g., Silberschatz & Curtis, 1993). The aim of this study is partly to replicate the results of previous research, but also to investigate whether these interventions are predictive of treatment outcome and strong therapeutic alliance. The transcripts of five brief psychodynamic psychotherapies were studied. For each case, the patients' plan was formulated, patients' tests were identified, the case-specific accuracy of the therapists responses to these incidents was rated, and the impact of these interventions on subsequent patient's affect and behavior, on therapeutic alliance and on treatment outcome was measured. If our predictions are confirmed, the results of this study may increase our understanding of the link between psychotherapy processes and treatment outcome.



## THE EFFECTS OF A MOTOR IMAGERY TRAINING IN THE SPINAL CORD INJURY REHABILITATION. PRELIMINARY RESULTS

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Motor imagery is the mental reproduction of a sequence of movements without a physical action (Jeannerod, 2001). This practice, widely used in sports, has been successfully applied in the neurological rehabilitation of patients with stroke (Page et al., 2001). Aikat and Dua (2016) and Thomschewski et al. (2017) reported that also patients with spinal cord injury can benefit from motor imagery, both for the reorganization of movement and for pain management. This research investigates whether motor imagery, coupled with the usual physiotherapy training, can improve the motor performance and quality of life of people with spinal cord injury. After controlling for the ability to visualize movements, a pre-post experimental design with a matched sample was proposed to assess the following variables: pain, anxiety, depression, self-efficacy, instrumental activities of daily life, and quality of life. A twenty sessions intervention was carried out with people with paraplegia aimed at improving the movement from the wheelchair to bed and vice versa, with and without the aid of support. Each participant was asked to mentally repeat the movement performed trying to improve its execution. Preliminary analyses testify feasibility of the protocol and highlight some interesting results.

## HEALTHCARE PROFESSIONAL NARRATIVES ABOUT INVOLVEMENT IN CANCER SCREENING PROGRAMS

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Preventive programs, including cancer screening are advantageous for early detection and treatments success. Therefore, the healthcare systems are making increasing efforts to ensure equity in access to preventive services inviting target populations to screening programs organized for breast, cervical and colorectal cancer risks. However, still several people do not participate. Within the One Health logic and action-research Miriade project founded by PRP Campania, this study aims to explore the dimensions that mediate the relationship between health services that provide cancer screening and target population. Forty semi-structured interviews were conducted with healthcare professionals involved in the practices of the three cancer screenings. A theory-driven narrative methodology was adopted based on Penchansky & Thomas' conceptualization of 5 dimensions of healthcare access: accessibility, affordability, availability, accommodation, acceptability. Main results show environmental resources and barriers, healthcare providers competences, health-literacy skills and emotional responses of the target population as narrative categories. Results suggest the psychological intervention trajectories to improve the individual involvement in cancer screening programs.

## EFFECTIVENESS AND CHANGE OVER TIME OF A BRIEF PSYCHODYNAMIC TREATMENT FOR ANXIETY AND DEPRESSION IN PUBLIC HEALTH SERVICES

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This study aims to investigate the effectiveness of a brief Dynamic Interpersonal Therapy (DIT) for anxiety and depression on pre-post outcomes and session-by-session outcome monitoring. Thirty patients (87.1% females,  $M_{age} = 26.74 \pm 7.69$ ) attended 16 online sessions of DIT in a Public Health Service. Patient outcomes were collected pre-post through Clinical Outcomes in Routine Evaluation-Outcome Measures (CORE-OM), Inventory of Interpersonal Problems (IIP-32), Hamilton Rating Scale for depression (HAM-D) and anxiety (HAM-A), and session-by-session through General Anxiety Disorder-7 (GAD-7) and Patient Health Questionnaire (PHQ-9). Results show a significant improvement in well-being at the end of therapy, as reported by patients (CORE-OM  $t=2.68$ ,  $p=.012$ ), and reduction of symptoms, as reported by clinicians (HAM-D  $t=5.51$ ,  $p<.01$ ; HAM-A  $t=5.34$ ,  $p<.01$ ). Moreover, outcome monitoring shows a significant decreasing trend of anxiety (GAD-7,  $r=-.20$ ,  $p<.01$ ) and depressive symptoms (PHQ-9,  $r=-.18$ ,  $p<.01$ ) with a logarithmic shape ( $R^2=0.86$  and  $R^2=0.82$ , respectively). Further results regarding the effect of predictors and moderators on the outcome and its trend will be presented. The study suggests the effectiveness of DIT and the helpfulness of session-by-session outcome monitoring.

## **SEXUALITY AND IDENTITY**

## LOOKING AT THE UNEXPECTED. SUPPORTING LGBT+ STUDENTS IN COLLEGE

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University represents a chance to explore one's identity without the limitations of family control and secondary school. Koshiw et al. (2018) highlighted a correlation between sexual identity repression and a negative impact on well-being, performance, and participation in academic life. The emotional atmospheres of an institution, influence the perception of ones identity as welcomed or unexpected. So, reflection on the discursive practices that connote an institution takes central importance, since language is a key aspect of relations and a vehicle for implicit meanings. Homophobic expressions communicate an hostile feeling of the institution and are negatively associated with the well-being of LGBT+ students (Woodford et al. 2012) and more broadly with a perception of unsafety. To prevent discriminations, it has been highlighted the efficacy of programs aimed to improve knowledge of differences, the institutional climate, interpersonal relationships and foster a sense of community (Hunt et al., 2002). This is the focus of the Antenne Satelliti project which aims to make students promoters of a reflection process on interaction in college and of training on the use of an inclusive language and on the respect of differences.

## DOING AND UNDOING GENDER DIAGNOSIS. UPDATES FROM DSM- V-TR

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The American Psychiatric Association (APA) recently completed a numerous year process of revising the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders releasing in March 2022 its Text Revision: DSM-5-TR. This novel volume includes the fully revised text and references of the DSM-5, as well as updated diagnostic criteria and ICD-10-CM insurance codes. At the conclusion of the DSM-5 revision process, the gender diagnoses were retained, albeit in altered form and bearing the new name of gender dysphoria in order reconciling patients' needs for access to care with the stigma of being given a psychiatric diagnosis. What changes in the diagnosis of Gender Dysphoria in the DSM-5-TR? (1) Significant updates to the terminology used to describe gender dysphoria. The term "desired gender" is now replaced by "experienced gender", the term "sex change medical procedure" is now "gender affirmation medical procedure" and the term "male at birth" / "female at birth" is now "male assigned to the individual at birth", "female assigned to the individual at birth". (2) The second innovation concerns an update of the national and international statistics of people with gender dysphoria. Implications for clinical research practice will be discussed.

## CHANGES IN SEXUALITY AFTER SEVERE ACQUIRED BRAIN INJURY (ABI): PRELIMINARY RESULTS

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Sexual health, defined as ‘a state of physical, emotional, mental and social well-being in relation to sexuality’, is one of the main human functions which can be affected after a severe ABI. Aim of this study was to investigate changes in sexuality in females following severe ABI. Sixteen females consecutively admitted in DH to the IRCCS Fondazione Santa Lucia hospital in Rome, were recruited. Sexual life was assessed by means of the Brain Injury Questionnaire of Sexuality (BIQS), Physical Disability Sexual and Body Esteem Scale (PDSBES), and the Beck Depression Inventory (BDI-II). Correlational analysis showed that lower levels of sexual and body self-esteem (PDSBES scores) were related to worse sexual life (BIQS scores) and higher levels of depression (BDI-II scores). The latter was also inversely related to the possibility to be engaged in sexual activities (BIQS, item 9), as well as to lower levels of sexual-related self-esteem (BIQS total self-esteem sub-score) and mood disorders (BIQS total mood sub-score). Severe ABI seems negatively affecting quality of sexual life, with a close relationship with mood disorders and low self-esteem. In particular, body dysfunctions seem to play a crucial role in determining such negative changes.

## INVESTIGATING SEXUAL DYSFUNCTION, QUALITY OF LIFE, AND EMOTIONAL HEALTH INDICES IN PATIENTS DIAGNOSED WITH HEADACHE DISORDERS

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Although sexual dysfunction (SD) is common in cephalalgic patients, it may not result directly from headache-related disability but be moderated by poor quality of life (QoL). Hence, the aim of this study is evaluating the predictive roles played by physical and mental indices in cephalalgic cases compared to healthy controls (HCs), regarding SD. N=103 outpatients (female=76.7%; mean age=39.58±12.76) recruited from Bari University Hospital were matched with 97 HCs. The research protocol consisted of: SF-36 (QoL); FSFI/IIEF (female/male sexual functioning); SCL-90-R (psychological status). Statistical analyses included Yates-corrected Pearson  $\chi^2$  and logistic regression. All p were <.05. 47.5% of cases reported SD, regardless their gender. No differences were found in sexual functioning within cases and HCs, separately. Associations showed higher occurrence of SD in cases with lower physical and mental health scores. Regression analyses showed that lower mental health and role-emotional (RE) predicted SD in cases, whereas old age and low RE predicted SD in HCs. (all <.001) Overall, the study revealed that both physical and mental QoL indices that were lower among cases with SD compared to HCs. In addition, impaired emotional functioning acted as a potential risk factor for SD.



## THE IMPACT OF COGNITIVE AND EMOTIONAL PROCESSING IN NARRATIVES OF WOMEN VICTIMS OF INTIMATE PARTNER VIOLENCE ON PTSD AND DEPRESSION SYMPTOMS

*Rossella Procaccia (Università e-Campus)*

Intimate partner violence is a social, medical and mental health concern. Victims of IPV are at greater risk of experiencing severe psychological distress such as depression and PTSD symptoms. In addition to standard psychotherapy and medication, an intervention that has received considerable attention is expressive narrative writing about traumatic experiences. Research has only recently begun to explore the underlying cognitive and emotional processes within trauma narratives associated with health improvements. This study aims to examine the relationship between cognitive-emotional linguistic content in trauma narratives and health improvements. Forty-eight abused women (mean age=35,64 SD=2,45) were asked to complete a 3-session writing task. PTSD and depression symptoms were assessed with LASC (King et al., 1995) and BDI-II (Beck et al., 1996) in pre and post writing condition. Narratives were analyzed with LIWC (Pennebaker & Francis, 1996), about emotional processing (positive and negative emotion) and cognitive processing (insight and causal). Regression analysis indicates that specific linguistic indicators of emotional processing predicted reduced PTSD and depression symptoms; cognitive processing predicts reduced PTSD symptoms. Clinical implications were discussed.

# **THE COVID EXPERIENCE AND ITS REPERCUSSIONS**

## EFFECTS OF PSYCHOLOGICAL SUPPORT ON DEPRESSION, ANXIETY, POST-TRAUMATIC STRESS, AND POSTTRAUMATIC GROWTH: RESULTS FROM A LONGITUDINAL STUDY ON HOSPITALIZED COVID-19 SURVIVORS

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This study assessed the effects of a psychological intervention for hospitalized COVID-19 survivors on depression, anxiety, PTSD, and posttraumatic growth. HADS, PCL-5, and PTGI were administered to patients at 2 months (T1), 6 months (T2), and 12 months (T3) after discharge. Between T1 and T2, patients received different treatments based on their needs: 134 received no psychological support; 24 received one psychological consultation; 31 received a longer psychological support. To balance the groups we randomly selected 28 patients from the no support group. Four mixed-model ANOVAs were used. At T1, the groups differed in anxiety and depression with patients in the no support group reporting lower scores. Patients in the no support group reported increased depression at T2, which remained stable at T3. Patients who received a psychological consultation reported increased anxiety at T2, which remained stable at T3, and increased PTSD from T2 to T3. Patients who received psychological support reported decreased depression at T2 but a worsening of depression and posttraumatic growth at T3 after the intervention was concluded. Psychological intervention was appropriately allocated. Longer support contributed to decrease depression but could be maintained to consolidate its effect.

## RISK OF POST-TRAUMATIC STRESS SYMPTOMS AFTER RECOVERY FROM COVID-19 AND THE ROLE OF PERSONALITY TRAITS, EMOTIONAL DYSREGULATION AND TRAUMA IN THE LONG COVID SYNDROME

*Valentina Lucia La Rosa (Dipartimento di Scienze della Formazione, Università di Catania), Giuseppe Craparo (Facoltà di Scienze dell'Uomo e della Società, Università degli Studi di Enna 'Kore')*

High rates of post-traumatic stress disorder (PTSD) symptoms have been found among patients with more severe COVID-19 related symptoms. Furthermore, persistent symptoms have been found in many patients who recovered from COVID-19. This study aimed to assess the impact of personality traits, alexithymia, dissociation, anxiety, and depression on the presence of PTSD symptoms in patients recovered from COVID-19 and to investigate the role of psychological factors in the onset of post-COVID symptoms. Five hundred six participants completed a battery of standardized questionnaires. Results showed that high levels of alexithymia, dissociation, anxiety, and depression statistically significantly predicted the three main clusters of PTSD symptoms in individuals who recovered from COVID-19. Furthermore, negative affectivity and psychoticism significantly predicted PTSD symptoms. In addition, COVID-19 hospitalized individuals are more at risk of developing intrusion and hyperarousal symptoms. Finally, difficulty in identifying emotions, hyperarousal, and antagonism were significant risk factors in the onset of post-COVID symptoms. These findings underline the importance of a psychotherapy setting focused on the experiences of the body to face the psychological consequences of COVID-19.

## PSYCHOLOGICAL VARIABLES ASSOCIATED WITH RESILIENCE AMONG ITALIAN UNIVERSITY STUDENTS DURING THE COVID-19 OUTBREAK

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This cross-sectional study aimed to identify psychological variables associated with resilience. 951 students were enrolled during the COVID-19 outbreak. The Resilience Scale (RS-11), the Depression Anxiety Stress Scales-21 (DASS-21), the Satisfaction With Life Scale (SWLS), the Positive Mental Health Scale 9 (PMH-9) were used. Correlation and regression analyses were run. RS-11 resilience was negatively related with DASS-21 depression, anxiety, stress, and positively related with SWLS life satisfaction, PMH-9 positive mental health ( $p < 0.001$ ). Regression model shown: step 1, females had lower resilience than males ( $\beta = -0.09, p = 0.004$ ), age was not related with RS-11 resilience ( $\beta = 0.05, p = 0.114$ ) ( $F = 5.08, R^2 = 0.009, p = 0.006$ ); step 2, lower DASS-21 depression was related with higher RS-11 resilience ( $\beta = -0.63, p < 0.001$ ), while DASS-21 anxiety ( $\beta = 0.33, p = 0.393$ ), DASS-21 stress ( $\beta = 0.08, p = 0.066$ ) not ( $F = 85.52, R^2 = 0.308, R^2 p < 0.001$ ); step 3, higher SWLS life satisfaction was related with higher RS-11 resilience ( $\beta = 0.48, p < 0.001, F = 134.51, R^2 = 0.457, R^2 p < 0.001$ ); step 4, PMH-9 positive mental health was related with higher RS-11 resilience ( $\delta = 0.52, p < 0.001, F = 159.59, R^2 = 0.539, R^2 p < 0.001$ ). Lower depression and higher life satisfaction and positive mental health were associated with higher resilience.

## PSYCHOLOGICAL SCREENING OF COVID-19 LONG-TERM SEQUELAE IN A COHORT OF PATIENTS ATTENDING THE UNIVERSITY GENERAL HOSPITAL OF VERONA

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Psychological diseases (depression, anxiety, and post-traumatic symptoms) have been observed after Sars-Cov2 infection. If not timely and appropriately recognized and treated, such symptoms can persist over time, affecting patients' quality of life. Aim of the present observational-longitudinal study, which is part of the Connecting European Cohorts to Increase Common and Effective Response to SARS-CoV-2 Pandemic (ORCHESTRA) study, is to characterize COVID-19 patients at 3, 6, and 12 months after the infection. Preliminary analyses on 717 patients screened at the Clinical Psychology Unit of the University General Hospital of Verona in June-November 2021 (25% screened after 3 months of COVID-19 onset, 41% after 6 and 34% after 12; age range: 13-93; 49% males; 43% hospitalized) showed that 22% of the sample had at least a mild psychological distress, 12% was over the cut-score at the Hospital Anxiety and Depression Scale (HADS) and 8% had a cognitive impairment (Montreal Cognitive Assessment-MOCA). Quality of life (Short Form-SF36) was deeply affected, in particular psychological wellbeing, vitality and social functioning. Sleep wake rhythm and feeding alteration regarded 25% and 12%, respectively. Finally, 43% of the total sample was interested in receiving psychological support.

# MINITALK

## PSYCHOPATHOLOGY AND ENVIRONMENT: THE CONSEQUENCES OF CLIMATE CHANGE ON PSYCHOLOGICAL WELL-BEING

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In recent years, climate change is accelerating, leading not only to strong repercussions on the environment and socio-economic implications, but also to the onset of a series of clinical syndromes defined as eco-psychopathologies (e.g., eco-anxiety, eco-guilt, eco-depression, solastalgia). To date, converging definitions and agreed upon operationalization of the eco-psychopathology diagnosis are missing and no data on the incidence in the population are available. Hence, the current study presents a systematic review comprehensively exploring existing international literature. Specifically, the systematic review focused on studies about environment and psychopathology. Results have revealed three main domains emerging from the literature. The broadest refers to the psychological consequences of subjects exposed to short- and long-term environmental disasters and related psychopathologies. The second refers more specifically to the psychological consequences associated with climate change. The last refers more generally on the effects of the environment on psychological well-being. Therefore, a connection has emerged between mental health and the environment, which will be further explored by investigating underlying causes of eco-psychopathologies.



## PREMATURE TRIADIC MUSIC THERAPY (PT-MT) FOR PREMATURE BABIES AND THEIR PARENTS

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Premature Triadic Music Therapy (PT-MT) is an active music therapy intervention where the music therapist and parents play together, synchronizing with the physiological rhythms of the premature baby. This single case study investigates whether PT-MT can reduce the distress levels experienced by premature babies and their parents. Therefore, a preterm baby and parents were recruited from the neonatal ward of the San Donato Hospital in Arezzo. The child participated in 5 sessions of PT-MT while the parents did three sessions. Blood saturation, blood perfusion, and heart rate in three stages (pre-PT-MT, during PT-MT, post-PT-MT) were measured for each PT-MT session. Instead, the parents completed the Edinburgh Postnatal Depression Scale (EPDS) at the interventions beginning and end. The results show improvement in the child's physiological indices between the time before PT-MT and during PT-MT, which remained stable in almost all sessions at the end of the intervention (post-PT-MT). The father did not change regarding the parents, while the mother reported increased distress at the end of the intervention.

## TESTING A MEDIATION MODEL BETWEEN EMOTION DYSREGULATION, DISSOCIATION AND COGNITION WITH RORSCHACH CS AND WECHSLER SCALES

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In our study we investigate the relationship among emotion dysregulation and dissociation, both measured with Rorschach Comprehensive System (CS), and cognition, evaluated with Wechsler Scales. Literature suggests a relationship among these three constructs, but there are no studies that consider all of them in a single model neither the implicit functioning. In order to achieve this aim, we use Rorschach CS that, contrarily to self-reports, catches various aspects of personality which the person is not aware of. These considerations are particularly true for affect dysregulation and dissociation that, by definition, may operate out of consciousness. Based on these reflections and on the literature, we select some Rorschach CS variables as indicators of emotion dysregulation and dissociation. The purpose of the study is to explore if emotion dysregulation affects cognition and if this relationship is mediated by dissociation. The sample is composed by 31 adolescents (11 – 17 years old), residing in therapeutic communities, that exhibit symptoms of complex trauma as markers of cumulative interpersonal traumatic experiences. Unexpectedly, data analysis doesn't show significant results. Methodological and theoretical issues are hypothesized to explain these outcomes.

## AND YOU, SEX(Y) OR NOT? GENDER DIFFERENCES AND PREDICTORS OF RISKY SEXUAL BEHAVIOR: PERSONALITY TRAITS, EMOTIONAL DYSREGULATION AND SEXUAL ASSERTIVENESS

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Although it is clear that Risky Sexual Behaviors (RSB) are associated with serious health consequences (Tavakoli et al., 2022), in Italy there are few studies (Pirani & Matera, 2020). Identifying predictors of unhealthy sexual habits represents a critical issue for prevention and clinical practice. This study explored predictors (personality, emotional dysregulation, sexual assertiveness) of RSB and tested mediational role of sexual assertiveness. Participants were Italian men (N=113; Age=29±5.42) and women (N=414; Age=29±6.86). Welchs-ANOVA, hierarchical regressions and Sobel-test were performed for men and women separately. For men, unhealthy sexual behaviors were positively predicted by neuroticism and openness and negatively by sexual assertiveness. For women, RSB was negatively predicted by sexual assertiveness, which played a mediational role between emotional dysregulation and unhealthy sexual behaviors. These findings suggest that sexual promiscuity was related to personality traits and sexual negotiation skills with gender differences. Increasing sexual assertiveness skills could be protective for unhealthy sexual behavior (Alvarado et al., 2020). Our results might be of interest to health care professionals developing services to promote sexually healthy societies.

## THE ITALIAN VERSION OF THE INTERPERSONAL SENSITIVITY MEASURE (I-IPSM): PSYCHOMETRIC PROPERTIES IN NON-CLINICAL YOUNG ADULTS

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The Interpersonal Sensitivity Measure (IPSM) is a self-report questionnaire developed to assess five dimensions of interpersonal sensitivity. Previous research suggests that the factorial structure of the IPSM is not clear enough. Moreover, the factor structure of the Italian version of the questionnaire (I-IPSM) has not yet been studied. This study explored the factorial structure, internal consistency and construct validity of the I-IPSM in a non-clinical sample of young adults. Participants were 374 adults (64,4% females) aged between 18 and 31 years ( $M = 21.96$ ;  $DS = 2.91$ ). They completed the I-IPSM and self-report measures of depression, anxiety, anger, and life satisfaction. The results from Exploratory Factor Analyses (EFA) did not support the original five-factor solution for the I-IPSM items. The EFA yielded three interpretable factors (Interpersonal Worry and Dependency, Low Self-Esteem, and Unassertive Interpersonal Behavior), and a total of 27 items were retained. Internal consistency was good. I-IPSM-27 scores positively correlated with depression, anxiety and externalized anger, and negatively with life satisfaction. The I-IPSM-27 seems a reliable and valid tool for studying interpersonal sensitivity in Italian young adults.

## THE BUFFERING EFFECT OF PSYCHOLOGICAL FLEXIBILITY ON THE RELATIONSHIP BETWEEN SELF-ESTEEM AND DEPRESSION

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This study explores whether psychological flexibility (PF) moderates the relationship between self-esteem and depression, as suggested by the theoretical model underlying the Acceptance and Commitment Therapy (ACT). According to the ACT model, it was hypothesized that the relationship between self-esteem and depression would be stronger in low- than in high-PF subjects. A total of 379 undergraduate students (73.9% female; Mean age = 22.9; SD = 6.8) completed measures of PF, self-esteem, and depression. The results from regression analyses showed that both lower self-esteem and PF scores were associated with higher depression. The interaction term (self-esteem x PF) was significant, suggesting that the effect of self-esteem on depression depends on PF levels. Additional analyses evidenced that the relationship between self-esteem and depression was stronger in the low- than in the high-PF group. These findings support PF as a moderator of the relationship between self-esteem and depression, hence suggesting that PF might buffer the detrimental effects of low self-esteem on mood.

## ONLINE COMMUNITIES FOR MENTAL HEALTH: ASPECTS AND IMPLICATIONS FOR CLINICAL PRACTICE

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Online communities for mental health (OCMHs) are widely used by people suffering from mental illnesses to cope with their conditions. The content present in Italian OCMHs on Facebook was explored concerning the subject matter and reasons of use by conducting a content analysis of 144 threads (1534 comments) on 2 OCMHs. Threads were randomly selected and coded by 2 coders (intercoder reliability: Krippendorff  $\alpha=.94$ ). Ethical approval was obtained by the university. Results indicate that participants ( $n=1044$ ) were predominantly female (72%) and the most prevalent topics addressed were anxiety (60%) and depression (36%), sometimes even concurrently (25%). Participants' requests for help ( $n=168$ ) distributes roughly in equal measure for: emotional support (38%), practical guidance on illness management (34%), and informational advice (29%). Interestingly, only 15% of replies suggests asking for the help of a mental health specialist, despite the high prevalence of discussions on matters such as treatment options (46%). The study offers insights for clinical practice confirming that OCMHs are used beyond the scope of seeking emotional support. Reliance on OCMHs poses potential risks as they might act as a barrier to more appropriate therapeutic support or challenge professional advice.

## PSYCHOLOGICAL CORRELATES OF FUNCTIONAL HYPOTHALAMIC AMENORRHEA: A NARRATIVE REVIEW OF THE EXISTING LITERATURE

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Psychological factors and stress have been found to be associated with functional hypothalamic amenorrhea (FHA), however, their role in the onset or persistence of FHA is still understudied. The study aims to review the existing literature on the psychological correlates of FHA. A systematic literature search has been conducted across the 3 major databases (PubMed, PsycINFO, Scopus) to explore the psychological correlates of FHA. The search was limited to peer-reviewed studies published in English from 2000 onwards. The search retrieved 349 articles that were reviewed according to inclusion criteria: cross-sectional studies; use of standardized and validated instruments for psychological assessment. Seven studies were included. The data analysis is ongoing. Preliminary findings indicate that the main psychological correlates of FHA seem to be drive for thinness or overweight preoccupation, perfectionism, anxiety, and depression. The included studies are heterogeneous for outcomes and measures thus preventing quantitative analyses and comparisons. Some of the methodological problems might be overcome by implementing observational and longitudinal studies with a comparison/control group or by including clinical psychologists in the psychological assessment and study design.

## EFFECTS OF COVID-19 PANDEMIC ON DYSFUNCTIONAL EATING BEHAVIORS AND SYMPTOMS AMONG THE GENERAL POPULATION: A SYSTEMATIC REVIEW AND META-ANALYSIS

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There is previous evidence that the COVID-19-related lockdown has impacted on mental health worsening among individuals with eating disorders (EDs) and clinical obesity. The aim of this systematic review and meta-analysis is to investigate the impact of the COVID-19 pandemic on the prevalence of eating disorders (ED) symptoms or dysfunctional eating behaviours (i.e. emotional overeating, night eating, snacking, binge eating, undereating, food avoidance) in general population. We searched eligible articles in Medline, Embase, PsycInfo, Scopus, and Web of Science. Prevalence rates were pooled with meta-analysis using a random-effects model. A total of 221 met the inclusion criteria. More than a half of participants experienced increased body weight and behaviors such as snacking, night eating and emotional eating. Weight, shape and eating concerns were also common. Pooled data of longitudinal studies showed a significant difference in BMI and dysfunctional eating behaviours before and during the pandemic. This meta-analysis evidenced a negative impact of the pandemic on eating behaviors among the general population. However, further longitudinal research is needed to examine the long-term negative consequences of COVID-19.



## VIOLENCE RISK ASSESSMENT AND RISK MANAGEMENT OF A FILICIDAL WOMAN

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Worldwide risk assessment and risk management process of violent offenders follows a standard method that implies well-defined theoretical models and the use of standardized tools. In Italy, this process is still highly discretionary. This study's objective was to highlight the advantages deriving from the use of risk assessment tools within the framework of an exploratory single case study. Recidivism risk and social dangerousness of an Italian filicidal woman were assessed through the administration of the Level of Service/Case Management Inventory (LS/CMI) instrument supported by Historical Clinical Risk-20 Version 3 (HCR-20 V3). The administration of LS/CMI showed that, in this single case, the subcomponents that still represent a criminogenic risk/need factor are: Family/Marital, Companions, Alcohol and Drug Problem and Leisure; while constituting strengths: Employment and the absence of a Pro-criminal Orientation and an Antisocial Pattern. Data collected through LS/CMI indicated life areas of the single case which should be emphasised not only to assess the risk of re-offending and social dangerousness, but also for a social rehabilitation program more suited to the subject. This study demonstrates that the LS/CMI assessment tool is suitable for the Italian context.

## THE PROTECTIVE ROLE OF SELF-ESTEEM AND PSYCHOLOGICAL WELLBEING IN EMERGING ADULTHOOD: A CASE-CONTROL STUDY

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Emerging adults (EA) face numerous challenges that can push them to question themselves. Self-esteem and psychological well-being are considered among the factors that promote a successful transition to adulthood. The main aim of this case-control study was to explore the role of self-esteem (RSES) and Ryff' PWB dimensions (PWBS) in decreasing the risk of EA who seeking for help psychological support during their university career. The sample consisted of 160 EAs (76.80% women), 80 who became clients to the psychological counseling service FOCUS-Psi UNIPG (FG) and 80 EAs who had never used help services balanced by gender ( $\chi^2 = .000$   $p < 1.000$ ) and age ( $t = -.862$   $p < .390$ ). The Mann-Whitney test showed that FG referred lower scores in the RSES and in Environmental Mastery, Self-Acceptance, and Autonomy PWBS dimensions. Logistic regression highlight that it is specifically RSES (OR = 1.23; 95%CI = 1.08–1.40;  $b = .210$ ;  $p < .001$ ) and Self-Acceptance (OR = 1.40; 95%CI = 1.07–1.82;  $b = .335$ ;  $p < .05$ ) that contribute to decreasing the risk of belonging to the FG. These findings suggest redirecting the counseling work on fragile dimensions found in the FG, to promote more personalized psychological health interventions in this specific life stage.

## PSYCHOLOGICAL INFLEXIBILITY MEDIATES THE EFFECT OF DEATH ANXIETY ON THE EUDAIMONIC WELL-BEING OF ITALIAN YOUNG ADULTS DURING THE COVID-19 PANDEMIC

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After the COVID-19 pandemic, young adults are an at-risk population, showing increased anxiety, depression, and stress (Wąsowicz et al., 2021). Literature has underlined the relevance of the eudaimonic approach to psychological well-being (Ryff, 1995) to account for individuals' self-realization within existential challenges. Previous research identified psychological inflexibility as a predictor of eudaimonic well-being (Calvo et al., 2020) and of mental health within the pandemic (Hernández-López et al., 2021); little is known about the impacting role of death anxiety elicited by the pandemic as an existential threat. This study investigated the mediating role of psychological inflexibility in the relationship between death anxiety and eudaimonic well-being among young adults. In March 2021, 335 Italian young adults (18-35 yrs) participated in an online survey, including measures of psychological inflexibility (AAQ-II), death anxiety (CL-FODS), and eudaimonic well-being (PWB). Analyses showed that psychological inflexibility significantly mediates the effect of death anxiety on eudaimonic well-being. These findings broaden our knowledge on the factors influencing eudaimonic well-being and provide insights for clinical work with young people challenged by uncertain times.

## IMPACT OF QUALITY OF LIFE AND AUTISTIC TRAITS ON INTERNET ADDICTION: A STUDY ON ITALIAN UNIVERSITY STUDENTS

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During the COVID-19 pandemic, studies reported higher risk for Internet Addiction (IA) in young adults, in comparison with the pre-COVID-19 period. In Italy, the research on protective and risk factors of IA in university students is still limited. Thus, we investigated the interaction of low quality of life (QoL) and sub-threshold autistic traits in explaining the overuse of the Internet among university students. The sample included 154 students aged between 19 and 30 years. Participants were asked to complete a brief on-line interview on Internet use and three standardized questionnaires: the Autism Spectrum Quotient, the PedsQLTM 4.0 Young Adult Version and the Internet Addiction Test. A moderation analysis was carried out using the QoL as independent variable, the IA as dependent variable and the autistic traits variable as moderator. The data showed a significant interaction effect, i.e. the QoL, moderated by the autistic trait variable, significantly affected the IA. In particular, as the QoL increased and the autistic trait decreased, the IA decreased. This study contributes to highlighting risk factors for IA and suggests to consider the QoL and the autistic traits in the planning of support interventions in order to prevent IA in university students.

## COGNITIVE PROFILE AND EXTERNALIZING/INTERNALIZING SYMPTOMS: AN OBSERVATIONAL STUDY ON ADOLESCENTS IN RESIDENTIAL THERAPEUTIC COMMUNITIES

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Childhood adverse experiences are associated with a higher risk to develop psychopathological outcomes, such as externalizing and internalizing symptoms. Many studies suggest that the effects of complex trauma on children and adolescents can also include cognition impairments. However, it is still not clear the relationship between these aspects, especially in adolescents with a history of complex trauma and who lived in a residential therapeutic community. Cognitive functioning and its interaction with symptoms is often little investigated, maybe because considered as less impacting than other problems. The aim of this study is to explore the occurrence of specific cognitive profiles in adolescents with a history of ACE and the possibility to highlight a relationship between cognition and externalizing/internalizing aspects. The sample is composed by 40 adolescents living in residential therapeutic communities and who were administered with WISC/WAIS and CBCL. Results suggest no significant interaction between cognition and symptoms. Nevertheless, some considerations can be made observing cognitive profiles of this sample, in order to improve the approach to the difficulties of adolescents in communities.

## THE IMPORTANCE OF TELE-INTERVENTION FOR CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD) DURING COVID-19 PANDEMIC

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Clinical services for children with neurodevelopmental disorders (NDD) were impacted by COVID-19 pandemic, with significant interruptions. Clinicians employed tele-interventions to continue taking charge of patients and families. We evaluated tele-interventions for families of children with NDD during pandemic restrictions. We conducted a (1) Qualitative analysis of video-recorded interviews to clinical psychologists, (n=10) to assess their experience of tele-intervention in terms of feasibility, communication quality, and perceived efficacy; (2) Quantitative analysis of 30 transcripts of clinical diagnostic interviews (15 presence, 15 online), to parents of children with suspected NDD coded by independent trained researchers for the function and referent of clinicians' speech units. Results revealed that clinicians' main concerns focused on how to promote reciprocity in relationship within the online setting. Further, analyses of the diagnostic clinical interviews highlighted specific adaptations of communicative style to the online setting. Remote clinical services have the potential to facilitate access to diagnosis and support for families of children with NDD. However, it is crucial to understand how clinical processes change in such context to guarantee working alliance.

## POSITIVE AND NEGATIVE EMOTION DYSREGULATION IN LOVE ADDICTION

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Literature highlights the need to understand the mechanisms underlying some emerging behavioral addiction (i.e. love addiction). Difficulties in the regulation of positive and negative emotions have been highlighted in several psychopathologies such as addictions (e.g. substance abuse), including behavioral addictions (e.g. gambling disorder). In order to provide a more nuanced view of love addiction, the emotion regulation framework was used. The present study aims to explore the role of positive and negative emotion dysregulation in Love Addiction. A self-report battery including Difficulties in emotion regulation scale, Difficulties in emotion regulation scale – Positive and Love Addiction Inventory was administered to a nonclinical sample (N=200). The results show association between difficulty in emotion regulation and affective dependence, confirming the initial hypotheses. These data make important contributions to our understanding of love addiction, directing future research.

## AN EXPLORATORY STUDY ON THE IMPACT OF THE COVID-19 PANDEMIC ON MENTAL HEALTH AND QUALITY OF LIFE DURING THE FIRST OUTBREAK IN ITALY

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The coronavirus pandemic (COVID-19), first identified in December 2019 and classified by the World Health Organization as a pandemic on March 2020, is still shaping our daily lives today. As physical health has begun to stabilize in the western world, an increasing concern is related to the impact of the virus and its containment measures on people's mental health. The present work aimed to explore the effect of demographic factors (age, gender, level of education, and socioeconomic status) and variables such as fear of COVID-19 and social support in predicting the quality of life and mental health of adults during the first wave of the pandemic in Italy. Through an online survey with 1087 Italian adults ( $M = 39.7$ ,  $SD = 16.39$ ; 74.4% women), gender and socioeconomic status emerged as crucial factors in determining differences regarding people's responses and reactions to the pandemic. In addition, the results highlighted the importance of perceived social support and a moderate fear of COVID-19 in predicting people's quality of life and mental health. The study suggests important guidelines for the development of interventions to support the population's well-being and mental health.



## THE NEUROSCIENCE OF DISSOCIATIVE PSYCHOPATHOLOGIES IN THE CONTEXT OF EMOTION REGULATION

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Dissociation is a complex construct that includes a broad constellation of symptoms, phenomena and processes. Different clinical perspectives and psychometric approaches support a transdiagnostic nature of dissociation across psychopathological disorders identifying a dissociative spectrum (DS). DS is composed by dissociative disorders, posttraumatic stress disorder, conversion disorder, somatoform disorders and borderline personality disorder. In DS dissociation is manifested in form of maladaptive and involuntary emotion regulation strategies. Several fMRI studies investigated the neural functioning of psychopathological disorders constituting the DS in response to emotional stimuli. Nevertheless, there are no studies that quantitatively summarize these findings. Accordingly, it was conducted a meta-analytic review of fMRI studies (N = 44; subjects = 1384) adopting a ROI-based (i.e., bayesian network meta-analysis) and voxel-based (i.e., SDM meta-analysis) approach. Results showed specific and common patterns of neural activity in response to emotional stimuli across the DS. Diagnostic and therapeutic implications of this neurobiological evidence will be discussed.

## EMOTION COMPREHENSION AND THEORY OF MIND IN PRESCHOOL CHILDREN AND AND PRIMARY SCHOOL CHILDREN: A QUASI-EXPERIMENTAL STUDY

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Childhood is an important developmental stage in which children acquire life skills such as social problem-solving and emotion regulation (McCabe & Altamura, 2011). This study examined, in preschool children, the emotion and relational understanding (TEC) as well as in primary school children, which were also tested in their comprehension of mental states starting from vocal indices (TEC1-TVSM). The study design is quasi-experimental with no control group and time series (baseline, training and post-test). A total of 22 preschool children (59.1% girls-40.9% boys; Mage=5.14 SD=0.7) and 15 primary school children (20% girls-80% boys; Mage=8.87 SD=0.3) were included. The emotional training consists of 17 meetings which included storytelling, role-play and emotion regulation. In the baseline, 13.6% of the children in preschool performed lower than the national average, while other children were average (M=1.23; SD=0.68). In the post-test, the mean score was M=1.73 (SD=0.45). In the pre-test phase, children in primary school had an average value of M = 0.47 (SD=0.64) while after the emotional training M=1.33 (SD=0.48). Therefore, specific emotion training is very important in children of this age as it helps them regulate emotions and understand mental states (Uyar et al., 2018).

## PARENTAL MENTALIZING AS A FRAMEWORK FOR EXPLORING CHILDS PSYCHOLOGICAL OUTCOMES DURING MIDDLE CHILDHOOD

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In numerous studies, parents' role has been explored as a key variable for child's psychological functioning. However, studies that investigated this topic within middle childhood are lacking. Inspired by attachment theory, this study aims to explore the role of parental mentalizing – operationalized as Parental Reflective Functioning and Parental Insightfulness – on child's psychological symptoms and social-emotional competencies within middle childhood. 86 parents and their 50 children were recruited from the general population. A multi-method approach to evaluate parental mentalizing by using Insightfulness Assessment and PRFQ was applied while parent-report questionnaires were employed to evaluate child's psychological functioning. Parental mentalizing appears to be significantly associated with both child's psychological symptoms and social-emotional competencies. There are, however, some discrepancies between the two informants reports – mothers and fathers – of child's psychological functioning. Results point out the importance of looking at parental mentalizing in both parents supporting (1) the role of keeping the child's mind in mind on child's psychological functioning and (2) the hypothesis that each parent is likely to play a different role about it.

## WHAT KIND OF ALLIANCE IN FAMILY MEDIATION? AN EXPLORATIVE STUDY

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Family mediation is a practice designed to help families to find specific and unique arrangements for parents and children following separation and divorce. To reach this goal, family mediators have to maintain an impartial position between the positions of the parents. However, less is known if parental couple perceive such impartiality as a balanced alliance or as a split alliance. As Bordin stated (1979), the alliance involves a bond that is developed through investment, mutual agreement, and collaboration on tasks and goals. However, the complexity of measuring multiple alliances that interact systemically is a challenge for the researcher. Results of an explorative study, using the Working Alliance Inventory Shortened Version (WAI-S; Tracey & Kokotovic, 1989) and contextual variables will be shown.

## BREAST CANCER: PATIENT-CENTERED MEDICINE AND INNOVATIVE TREATMENTS

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Chemotherapy-induced alopecia (CIA) is a temporary form of hair loss after cancer treatment and remains an emotionally traumatic side effect for cancer patients that affects quality of life. The DigniCap Scalp Cooling System is designed to prevent hair loss by cooling the scalp to reduce the impact of chemotherapy on hair follicle cells. Aim of the study is to verify the impact of digital and psychological combined treatment on young patients. We conducted clinical case study: 40-year-old woman with Breast Cancer (BC) diagnosis and BRCA1 germline mutation carriers, was evaluated by psychological tests (psychological distress, anxiety, depression, stress, body self-perception) during the psychological treatment (T0, T1, T2). Psychological tests showed a reduction in the level of psychological distress, good ability to manage the dynamics of oncology treatment, good self-perception and absence of anxiety and depression in long-cumulative survivorship. the implementation of clinical, digital and psychological treatments into integrated therapeutical perspective can increase the wellness of patient in lifelong wellness and win life back after cancer experience.

## PLANNING IN HEALTHY ELDERLY AND MILD COGNITIVE IMPAIRMENT: A SYSTEMATIC REVIEW

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Mild Cognitive Impairment (MCI) is a syndrome that is intermediate between healthy and pathological aging, characterized by psychological and behavioral symptoms and by the decline of one or more cognitive functions (e.g., executive functions; EF). Planning is a high-level EF involved in organizing and providing behavior in given situations and to think ahead to achieve a goal through a series of intermediate steps. Accordingly, planning is a fundamental ability in the daily life. The purpose of this systematic review was to provide evidence on the relationship between planning and cognitive decline considering differences between healthy and MCI elderly, assuming the role of planning deficits as a predictor of cognitive decline. Thirty-seven studies evaluated planning in healthy elderly and MCI participants, and 59.5% reported poorer planning performance in MCI. However, these data should be interpreted with caution; the results show a negative trend in MCI who reported lower capacity than healthy elderly, even though some studies used inappropriate tests which are not specific for planning assessment. Finally, this finding may have clinical significance because planning ability deficits could be a predictor of MCI.

## SUBJECTIVE QUALITY SLEEP IN HEALTHY ELDERLY AND MILD COGNITIVE IMPAIRMENT

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Aging is associated with physiological decline involving psychological, behavioral, and cognitive domains which may evolve in Mild Cognitive Impairment (MCI), a risk state prodromal to dementia. Aging is characterized by changes in the structure and quality of sleep, which is a fundamental aspect of life. When sleep alterations become substantial, they can generate or accelerate cognitive decline. This work aimed to analyze differences in sleep quality between healthy and MCI participants. One hundred sixty-eight adults participated in the study: 84 MCI participants (mean age:  $59.82 \pm 6.86$ ) and 84 healthy participants (mean age:  $60.29 \pm 7.15$ ). The Pittsburgh Sleep Quality Index (PSQI) was administered to assess subjective sleep quality. ANOVA was performed and significant differences emerged in the daytime sleepiness scale. Moreover, high prevalence of poor sleep quality (PSQI > 5) in both healthy (72.62%) and MCI (79.76%) elderly emerged. These data suggest that daytime sleepiness, which is an indirect index of poor sleep quality, can be included as a predictor or symptoms of MCI.

## WORRIES DURING THE COVID-19 LOCKDOWN: A QUALITATIVE TEXT-ANALYSIS ON ITALIAN PARENTS

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While representing an incredible event, conclusive evidence on the psychological impact of home confinement, quarantine, and isolation on children and adolescents is elusive. To better understand the intra-psychic change that occurred in children and adolescents, 452 parents ( $M_{age} = 44.6$ ,  $SD = 5.9$ ; 93.1% mothers) of Italian children aged 5-17 years were asked to describe narratively their children's worries two weeks after the first Italian lockdown. This open question was content analyzed by the T-LAB text analysis software to extrapolate the occurrences and co-occurrences, and to analyze the word associations. Significant keywords were Friends, Grandparents, School, and the relative verbs that express situations of lack/distance. Relevant co-occurrences emphasized the urgency of having to worry about all those human aspects related to the Corona-Virus. The relations between words showed the uncertainty of the situation experienced and a continuous call for a return to normality. These results suggest that the need for closeness and contact with relatives during quarantine and isolation may be a risk factor for children's psychological wellbeing. Institutions should pay attention to this in proposing a future lockdown.



## AN EXPLORATIVE STUDY ON EXPOSURE TO EXTENDED REALITY IN HF AUTISM

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Extended Reality (XR) technologies appear to be promising and motivating platforms to provide treatments for children with Autism Spectrum Disorders (ASD). Recent studies highlight that an engaging context and a gradual exposure in a controlled environment can enhance social skills. The purpose of this exploratory study is to assess the reaction of children with ASD to Virtual Reality (VR) or Augmented Reality (AR) scenarios. In particular, this research investigates the responses of 19 pre-adolescents and adolescents with High-Functioning Autism after exposure to three different XR devices, one of AR and two of VR. The analysis of the responses of questionnaires shows that most of the participants understands easily how to use the XR devices and these technologies allowed participants to interact functionally with the virtual objects presented and to move easily in the environment. Furthermore, the immersion in virtual scenarios adopted does not seem to cause discomfort to the participants. Overall, the results suggest that the experience was qualitatively positive, highly motivating and engaging. These findings are interpreted as encouraging towards a clinical investigation of the usage of XR technologies to monitor or improve attentional and stress management in ASD.

## THE EFFECTS OF NATURAL DISASTERS AND EPIDEMICS ON SEX RATIO AT BIRTH: A SYSTEMATIC REVIEW

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The impact of maternal stress on several birth outcomes is well established in scientific research. We reviewed the literature on the relationship between catastrophic stressful events and sex ratio at birth (SRB), namely the ratio of male to female live births. Particularly, the impact of natural disasters and epidemics on SRB was investigated. According to the Trivers-Willard hypothesis, we assumed a decline of SRB after catastrophic stressful events. A systematic search was run on Scopus, PubMed, Web of Science, and Cochrane Database, until February 2021. The search produced 1223 articles and 19 studies met inclusion criteria. We found 7 case-control and 12 observational studies. Most of studies investigated the impact of natural disasters (earthquakes, volcanic eruptions, floods, hurricanes). Three studies examined the effect of epidemics/pandemics (Spanish flu, HIV, Tuberculosis, Cholera, Whooping cough). The hypothesis on a significant decline of SRB after a catastrophic stressful event was confirmed in 15 studies. Our findings contribute to the knowledge on the association between socio-ecological factors and SRB. Future studies should investigate the mechanisms (a.i. prenatal stress) by which this relation impacts pregnant women's health and public health in general.

## THE COVID-19 PANDEMIC EXPERIENCE IN YOUNG ADULTS: PRELIMINARY RESULTS FROM THE YAPEQ (YOUNG ADULTS PANDEMIC EXPERIENCE QUESTIONNAIRE)

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Young adults have long been considered a high-risk target in the development of psychological distress due to the relational and social transformations that the COVID-19 pandemic caused. The present study investigates the ways in which young adults (N=259) lived the pandemic in its multiple phases through the administration of a self-report measurement tool (YAPEQ) developed from the results of an exploratory preliminary study. The YAPEQ is composed of 24 Likert scales validated through internal consistency and exploratory factor analysis. Our results show the prevalence of negative emotions during lockdown (M=3.50; DS=.92) and the second wave (M=3.32; DS=.96), loss of life control (M=3.46; DS=.87), fear of getting infected and of infecting others (M=3.64; DS=.87), infodemic during lockdown (M=3.50; DS=.72) and the second wave (M=3.36; DS=.78) as well as low levels of life satisfaction (M=18.4; DS=6.81) and dispositional optimism (M=17.5; DS=4.91). In addition, our findings shed light on a high sense of responsibility as well as a strong preference for coevals (M=3.19; DS=.85) as compared to adults (M=2.16; DS=.88). Correlational analysis predicted two regression models which emphasised the traumatogenicity of the pandemic during lockdown (R<sup>2</sup>=.39) and the second wave (R<sup>2</sup>=.56).

## COMUNICABENE, AN IMAGERY TRAINING TO INCREASE ASSERTIVENESS. A PROTOCOL OF INTERVENTION

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The last decades have been characterized by a growing use of imagery-based techniques. A broad range of evidence suggests that they have a significant positive influence on beliefs about the future, in improving specific skills and in purpose-oriented behaviours. Considering the versatility of imaginative techniques, we developed *ComunicaBene*, a web-based imaginative training to improve assertiveness. It provides three online sequential learning modules: i) a psychoeducation about emotions and assertiveness is provided; ii) a series of guided imagery exercises are presented; iii) participants apply the acquired skills in real-life situations and monitor their interactions. The program includes a periodical supervision of a Tutor. The Tutor aims to maintain and stimulate motivation and commitment, to monitor the progress, and to discuss the performed activities. We hypothesize that *ComunicaBene* will effectively improve assertiveness, decrease negative emotions associated with social interactions, and promote the ability to satisfy ones needs. The use of imaginative techniques within assertive training could maximize the effectiveness of classical cognitive and behavioral techniques.

## PARENTING AND ADOLESCENT PSYCHOLOGICAL FUNCTIONING: PRELIMINARY FINDINGS ON THE ROLE OF MENTALIZATION

*Serena Di Giandomenico (Università di Urbino)*

Research emphasizes the influence of parental qualities in the development of compromised adolescent emotional and behavioral outcomes. Driven by mentalization theory, this study aims to explore connections between parental childhood adversities, reflective functioning and style and adolescent internalizing, externalizing and borderline personality traits. The study is also addressed to extend research on PRF in fathers. Basing on the literature, is assumed that more problematic functioning in adolescent is positively related to impairments in mentalization, in both parents and adolescents, with gender differences. 142 adolescents (14-18), 137 mothers and 114 fathers recruited in two Italian high schools completed the tools: CTQ-SF (Bernstein e Fink, 1998); RFQ-8 (Fonagy et al., 2016); PRFQ-A (Luyten et al., 2017); PSDQ (Robinson et al., 2001); YSR (Achenbach e Rescorla, 2001); BPFS-11 (Sharp et al., 2014); MZQ (Hausberg et al., 2012); IPPA-R (Armstrong & Greenberg, 1987). Descriptive, correlation and regression analysis were performed. Results support the hypothesis and are observed with a view to possible intergenerational associations, through the lens of the mentalization theory. Limitations of the study, clinical aspects and implications for future research are discussed.

## THE ROLE OF ALEXITHYMIA IN SOCIAL COGNITION: EVIDENCE FROM A NON-CLINICAL POPULATION

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Alexithymia is a personality construct characterized by difficulty in identifying and describing one's emotions. The present study aimed to investigate whether people with alexithymia have diminished social cognitive skills, where social cognition encompasses the set of abilities that allows individuals to navigate the social world. Two hundred six participants were recruited. Alexithymia and a set of social cognition skills were assessed. Multiple hierarchical regressions were performed to assess whether alexithymia could significantly predict each social cognition ability, beyond the effect of anxiety/depressive symptoms. Alexithymia significantly predicted emotion recognition ( $\beta=-0.219$ ,  $p=.005$ ), empathy ('Perspective-Taking',  $\beta=-0.382$ ,  $p<.001$ ; 'Fantasy',  $\beta=-0.189$ ,  $p=.012$ ; 'Empathic Concern',  $\beta=-0.190$ ,  $p=.009$ ; 'Personal Distress',  $\beta=0.330$ ,  $p<.001$ ), and emotional regulation ( $\beta=0.337$ ,  $p<.001$ ), even after controlling for anxiety/depressive symptoms. The present findings suggest that recognising others' emotions and feelings relies on the ability to correctly identify one's own feelings. Those results also indicate the importance of taking into consideration individual differences in the levels of alexithymia when investigating social cognition in non-clinical populations.

## A CROSS-SECTIONAL STUDY ON THE ASSOCIATION BETWEEN ALEXITHYMIA AND QUALITY OF LIFE (QOL): THE ROLE OF SOMATOSENSORY AMPLIFICATION (SSA)

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Scientific research has long recognized the Alexithymia as a risk factor for individuals psychophysical well-being. The Somatosensory Amplification, understood as the tendency to perceive somatic sensations as excessive and harmful, is often associated with Alexithymia. The difficulty of affective regulation and the subsequent somatization processes, such as SSA, could compromise the QoL. The aim of our study is to explore the relationship between QoL and Alexithymia and the role of SSA in this association. It is assumed that exists a negative correlation between TAS-20 and QoL and that SSA moderates this relationship. Data was collected through an online cross-sectional survey was performed with Qualtrics® Survey Platform. The sample size of our survey included 2251 Italian adults. The online survey included WHOQOL-BREF, used to assess QoL, MSPQ, used to asses Somatic Perception and TAS-20, used to asses Alexithymia. Preliminary results confirm our hypothesis.

## DATING IN A DIGITAL WORLD: BORDERLINE PERSONALITY AND PSYCHOLOGICAL REACTIONS TO GHOSTING

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Ghosting is a unilateral relationship dissolution strategy which is quite frequent nowadays, and that is gaining attention in psychological research. According to clinical literature, people with borderline personality are particularly sensitive to interpersonal rejection. However, no studies investigated the link between borderline personality and experiences of ghosting. Psychological reactions to ghosting have been explored in a randomized two-wave experimental study. A sample of 604 young adults (mean age =  $22.35 \pm 2.75$ ) completed measures of borderline traits at the baseline. In the experimental session, participants were asked to read a scenario describing either situations of ghosting or of direct break-up. Participants were randomly assigned to one of the two conditions. Measures of negative emotional states and state paranoia were assessed after the experimental manipulation. Results revealed that participants experienced greater negative emotions and state paranoia in the ghosting condition compared to the direct break-up condition. Moreover, results showed that borderline traits significantly amplify shame reactions to interpersonal rejection, especially in the ghosting condition.



## BETWEEN YOU AND ME: A SYSTEMATIC REVIEW OF OBJECT RELATIONS ASSESSMENT

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Object relations (OR) are a key construct for psychodynamic theory and practice: they allow to accurately describe complex relational phenomena in normal and pathological personalities, serving as a diagnostic and clinical tool. The accurate assessment of OR is relevant to both researchers and clinicians willing to better understand interpersonal dynamics. We conducted a systematic review of empirical instruments that assess OR on PsycInfo and Pubmed. The search yielded 49 instruments. 31 were patient-based instruments, such as self-reports, projective tests, and interviews, and 18 were clinician-rated instruments. Many of these tools are well known in the scientific community; some other instruments show interesting potential and might benefit from further empirical support. The assessment of OR rests on several valid instruments, yet there is room for improvement. The development of new and existing tools referring to Kernberg's theory of personality organization could contribute to an up-to-date, empirically informed assessment of object relations; also, the inquiry of qualitative aspects of object relations could advance the understanding of pathological interpersonal functioning.

## PSYCHO-SOMATIC BASIS OF INTERSUBJECTIVITY AND PARENTING: A LONGITUDINAL STUDY

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Early sensitive mother-infant interactions are crucial for child optimal development. However, different forms of maternal psychopathology or sensory alterations (e.g., maternal somatic symptom disorders, SSD) can worsen parenting by potentiating problems that can impair intersubjectivity, defined as the understanding of self and others internal, covert states. So, the presence of maternal SSD, which have been significantly associated with chronic stimulation of stress response systems, cerebral alterations, high rates of emotion dysregulation and poor mentalization, might represent a risk factor for adjustment to motherhood and dysfunctional intersubjectivity. Despite this, studies in this area have primarily focused on intergenerational transmission of specific psychosomatic symptoms and their effects on medical aspects of pregnancy or birth outcome. Aim of this research project will be to longitudinally investigate relational, behavioral and neural characteristics of intersubjectivity in a sample of mothers with SSD, with an additional focus on the father as a particularly salient protective factor, contributing to co-regulation of negative maternal affect and reducing adverse maternal and infant health outcomes. Here, the study protocol will be presented.

## THE BINGE WATCHING CONTINUUM: FROM LEISURE ACTIVITY TO ADDICTION

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Binge-watching (BW) refers to a new vision pattern of TV contents, characterized by the consecutive viewing of three or more episodes of the same series in one sitting. Although some negative effects on mental health were evidenced, no clear differentiation between BW as a leisure activity and problematic behavior was highlighted. This study aimed to verify and deepen the psychological characteristics of different approaches to the vision of TV series). Data from 482 respondents (age:18-35) were collected via online survey using self-administered questionnaires evaluating Binge Watching Addictive behavior, trait and social anxiety, depression, impulsivity, and emotional dysregulation. Participants were divided into Problematic BW, Moderate BW, Non-BW, and No-viewer, and differences between groups were tested for each psychological variable. An association between problematic BW and mental health was evidenced. In particular, people with problematic BW showed a worse mental profile. Interesting, positive effects of no problematic BW were partially evidenced. Moreover, a sort of continuum characterized by a negative linear trend from the BW as a leisure activity to problematic BW was marked, indicating a possible maladaptive behavior orientation as an addiction disorder.

## OUTCOME AND PROCESS EVALUATION OF A MASTER'S TRAINING PROGRAM: PROPOSAL OF A NEW SYSTEM

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This contribution illustrates the training evaluation system developed within the two-years Master in Family and Community Mediation of the Catholic University of the Sacred Heart of Milan. The work was inspired by the assumption that research and training are strongly interconnected. Moreover, it considers evaluation as a part of the training experience itself. The evaluation system, composed by two parts – outcome and process – will be described. The outcome research focuses on the individual trainee as well as the group of trainees; we used two different self-report questionnaires within a longitudinal research design. The process research is aimed at analyzing some frames of the training path in terms of interactive exchanges among the group of participants, starting from some specific indicators. Both research and practical implication of this evaluation system will be reported. Indeed, a distinctive element of our work is the sharing of results within the Staff of the Master and with the participants. In this way, the main meanings can be shared during the whole process, showing their relevance in terms of short and long-term operational consequences.

## EXPLORING THE ASSOCIATION BETWEEN ALEXITHYMIA AND INTEROCEPTION

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Interoception, the ability to perceive internal bodily states, is fundamental to developing emotional awareness. Thus, interoceptive deficits are often studied in relation to alexithymia, a condition characterized by poor emotional awareness. The exact relationship between them is still debated. Our contribution to this issue relies on self-reported data collected in Italy, the US, and Singapore (N= 814). Correlation and machine learning techniques were applied to explore the association between alexithymia and interoception. Results showed that interoception is associated with two components of alexithymia (difficulty identifying and defining feelings) out of the three composing the Toronto Alexithymia Scale. Further analyses using the psychological network approach were performed in a subsample (N=504), where Big Five traits were also assessed. Results confirmed that the other dimension of alexithymia (externally oriented thinking) is independent from interoception, while linked with the Openness to Experience. Further, they suggested that, when controlling for neuroticism, alexithymia is mainly revealing of the tendency to ignore sensations of pain or discomfort. These results clarify the degree and the kind of association between alexithymia and interoception.

## ASSESSING THE RELATIONSHIP BETWEEN CLINICIANS ADHERENCE TO MBT TECHNIQUES AND CHANGES IN PATIENT'S REFLECTIVE FUNCTION

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The assessment of clinician adherence and competence is central in determining the effectiveness of treatments. Mentalization is the ability to consider self and other's mental states and is one of the most important non-specific factors for the outcome of treatments. Reflective Function (RF) is an empirical operationalization of mentalization and can be assessed using the Reflective Functioning Scale (RFS; Fonagy et al., 1998). This study evaluates how much clinicians' adherence and competence to Mentalization-Based Treatment (MBT) principles determine changes in patients' mentalization in non-MBT psychotherapy sessions. The research aims are: to explore the relationship between clinicians' adherence to MBT and patient's in-session RF, and analyzing the relationship between MBT techniques and patients RF. 57 verbatim transcripts of individual psychotherapy sessions conducted with patients (N=16) with different mental disorders were assessed using the Mentalization Based Treatment- Adherence and Competence Scale (MBT-ACS; Bateman, 2020) and RFS. Non parametric statistical analyses shows an association between clinicians' adherence to MBT and increased patient RF, and a significant association between specific MBT techniques and increased RF emerges.

## THE IMPACT OF ROMANTIC ATTACHMENT STYLE, EMOTION REGULATION, DYADIC EMPATHY AND SEXUAL COMMUNICATION ON SEXUAL DESIRE IN A SAMPLE OF CISGENDER WOMEN AND MEN IN A ROMANTIC RELATIONSHIP

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Few empirical studies have explored the psycho-relational factors that can influence and/or predict the expression of sexual desire in people engaged in a romantic relationship. The current study aimed to better understand the way that romantic attachment style, emotion regulation, dyadic empathy and sexual communication may impact sexual desire in a sample of cisgender men and women. In total, 325 individuals (195 cisgender women, 130 cisgender men) participated in a web-based study examining sexual and relationship dynamics. Multivariate regression models indicated that non-acceptance of emotional responses significantly predicted sexual desire in both ciswomen (24.2% of variance accounted for) and cismen (11.6% of variance accounted for). The main predictors of female sexual desire were anxious romantic attachment, avoidant romantic attachment and the lack of emotional awareness (30.2% of variance accounted for). Regarding male sexual desire, the main predictor was the impulse control difficulties. The ability to control impulsive behaviors when experiencing positive emotions had a weaker effect on female sexual desire. The variables analyzed could represent important factors to consider in therapy in assessing concerns about couple desire.

## AGGRESSION AND GAMBLING: THE MODERATING ROLE OF PERCEIVED SOCIAL SUPPORT

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Gambling is a widespread behavior which entails many negative consequences (Heinz et al., 2019). Among the risk factors associated with gambling, a key role appears to be played by aggression (Allami et al., 2018). Although this link is evident, less is known about the possible variables that may influence this relationship. This study aimed to investigate the moderating role of perceived social support on the relationship between aggression and gambling. 92 adults (48.9% males; Mage = 30.23 ± 10.76) that had gambled at least once in the previous year were recruited. The Italian versions of the Aggression Questionnaire (Fossati et al., 2003), the Multidimensional Scale of Perceived Social Support (Di Fabio et al., 2008), and the South Oaks Gambling Screen (Guerreschi et al., 2002) were used. A moderation analysis was carried out to examine the role of social support on the relationship between aggression and gambling. Overall, aggression was associated to gambling, but this relationship was moderate by the level of perceived social support: at high level of social support the level of aggression was not more linked to gambling. Therefore, results showed that social support can be a significant protective factor for the implementation of gambling in aggressive individuals.



## THE ROLE OF ATTACHMENT IN GAMBLING BEHAVIORS AND GAMBLING DISORDER: A SYSTEMATIC REVIEW

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The relationship between attachment-related phenomena and addictive behaviors is a topic of great interest in literature. However, evidence on the association with gambling has not yet been systematized in literature. Therefore, the present systematic review aimed to fill this gap. Following the 2020 PRISMA guidelines, a systematic search in four electronic scientific databases (Scopus, PubMed, PsycInfo, and Web of Science) was conducted. After removing duplicates, a total of 13 articles met the inclusion criteria and were selected for the present systematic review. Results underline the significant role played by attachment-related phenomena in gambling behaviors, highlighting that specific attachment contexts have a different influence on gambling, also depending on whether gamblers are youths or adults. In particular, while secure attachment is a protective factor for the onset of gambling behavior, insecure attachment emerges as a vulnerability factor in two ways. On the one hand, insecure attachment directly favors gambling behaviors; on the other, it affects coping strategies and the individual's ability to identify and regulate emotions, which in turn predict gambling. Limitations, strengths, and implications of the present systematic review will be discussed.

## PSYCHOLOGICAL IMPACT OF THE COVID-19 PANDEMIC: A QUALITATIVE STUDY OF VULNERABLE POPULATIONS IN TUSCANY WITHIN THE MOBILE OPPORTUNITY AGAINST STRESS (MOST) PROJECT

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The COVID-19 pandemic caused a global health crisis, leading to psychological distress and other symptoms, especially among vulnerable people. The Health Beliefs Model (HBM) showed efficacy in promoting health behaviors and mitigating perceived health threats. Within the project Mobile Opportunity against Stress (MOST), funded by Tuscany Region, this study aimed at evaluating the COVID-19 impact on specific populations' psychological health, using a qualitative design. Five online focus groups (3-8 participants) involved frontline and non-frontline health workers, young adults, older people, and entrepreneurs. COVID-19-related perceptions, attitudes, beliefs, and needs have been analyzed using the inductive content analysis. The themes have been clustered into 52 codes and 8 families: information search, perceived gravity, perceived vulnerability, pandemic-induced changes, preventive behaviors and social distancing, future, vaccine, negative psychosocial outcomes. Following the HBM, all populations perceiving high levels of gravity and vulnerability adopted useful health preventive measures, which in turn might lead to negative psychosocial consequences. These findings will allow to implement a MOST mobile app for self-monitoring and stress management during pandemic periods.

## DEPRESSION, COPING STYLE, AND FAMILY FUNCTIONING IN WOMEN CAREGIVER DURING THE COVID-19 PANDEMIC

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It is well known that the most common female response strategy to stressful life events is related to emotionality. Adopting a problems management strategy focused on emotions could expose women with family responsibilities to a greater risk of burnout (Pinquart & Sörensen, 2006). The aim of the present study is to evaluate psychological well-being, coping styles and family functioning in a sample of women caregiver, following recent stressful life events such as the COVID-19 pandemic. The results of the survey showed that more than half of the women interviewed (51.2%) reported difficulties in managing family-work during the pandemic, and most of them requested psychotherapeutic treatment (21.3%). Women caregiver reported greater difficulty in pursuing and planning individual goals, thinking positively about events, and asking for help. At the same time, they had a marked tendency to bring out unpleasant feelings, behavioral disengagement, and self-blame. These results underline the importance of guaranteeing psychological support to women who relentlessly take care of family members with physical or mental disabilities, often taking away precious time from themselves, helping them to overcome the fear of social stigma.

## THE IMPACT OF PROBLEMATIC SOCIAL MEDIA USE ON ADOLESCENTS' ANXIETY AND DEPRESSION: THE MEDIATING ROLE OF SELF-ESTEEM

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Some studies have shown associations between problematic social media use (PSMU) and adolescents' anxiety/depression, but the direction and the potential mechanisms of the associations are unclear. Literature suggests that PSMU is a risk factor for internalizing disorders while self-esteem is a protective factor. This study aimed to explore how PSMU was associated with adolescents' internalizing disorders and whether self-esteem mediated the associations. Participants were 267 Italian adolescents aged 13-17 years ( $M=15.4$ ,  $SD=1.1$ ), who filled in the pediatric PROMIS anxiety and depression symptoms scales, the Rosenberg Self-Esteem Scale and the Bergen Social Media Addiction Scale. Hayes PROCESS Macro was used to test the mediation analyses. Results showed that PSMU was negatively correlated with self-esteem, and positively correlated with anxiety and depression. Self-esteem was negatively correlated with anxiety and depression. Moreover, self-esteem mediated the association between PSMU and anxiety and depression, respectively. In conclusion, this study highlights the complexity of the phenomenon of PSMU and its relation with internalizing disorders. Developing high self-esteem in adolescents can reduce the negative psychological consequences of the PSMU.

## ADOPTION AS SOCIAL PARENTHOOD: THE SOCIAL REPRESENTATION OF ADOPTIVE FAMILIES IN THE ITALIAN CONTEXT

*Laura Gorla (Università degli Studi di Milano-Bicocca), Laura Gorla (Università degli Studi di Milano-Bicocca)*

Adoptive parenthood could be defined as a social form of parenthood since adoptive families require institutional recognition. As such, they could be particularly affected by the representations prevalent within the social context. The current study explores how adoptive families are perceived in Italy. Our sample is composed of 511 participants (80%, N = 413 women; 19%, N = 98 men) whose average age of 31. We administered both an ad hoc questionnaire regarding the social representations of adoption and standardized instruments such as the Differential Semantic (Osgood, 1957), the Vignette, and the Couple Rating Scale (CRS; Crawford et al., 1999). Most of our sample (71.6%, N = 366) recognized the social dimension of adoptive parenthood, described the adoptive parents by using only positive adjectives (i.e., confident, unselfish, warm, resolute), and moved towards their children by emotions of love, joy, and fear. Participants were more likely to be worried about social support for adoptive families than for biological ones ( $F(5) = 2.44; p = .033$ ), especially for families adopting a girl from another country ( $Wald = 9.74, p = .002$ ). Our study sheds light on an underdeveloped but essential aspect for adoptive families and has strong clinical and practical implications.

## A SUITCASE OF MEMORIES TO RELIEVE BURDEN IN DEMENTIA PATIENTS' CAREGIVERS

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Caregivers of dementia patients are critical to the quality of life of care-recipients; therefore, many psychosocial interventions have been developed to reduce caregiver burden. Reminiscence therapy, which uses life storytelling to improve psychological well-being, showed a positive impact on dementia patients, however, it was never applied to caregivers' groups. The present study aims to evaluate the efficacy of a group reminiscence therapy intervention (the suitcase of memories) on relieving caregiver burden, anxiety and depression, while ameliorating life satisfaction. Participants will be recruited from older adults' day-care centres to take part in a RCT. They will be asked to provide sociodemographic information and caregiving activities-related info, moreover, the Caregiver Burden Inventory (CBI), the Hospital Anxiety and Depression Scale (HADS) and the Satisfaction with Life Scale (SWLS) will be administered. Preliminary results will be presented, showing whether the intervention will be effective in reducing stress levels, while improving mood, anxiety and life satisfaction in caregivers.

## THE “SYNCING CURE”? A META-ANALYSIS OF THE ROLE OF THE BEHAVIORAL SYNCHRONY ON THE THERAPEUTIC PROCESS AND OUTCOME

*Camilla Gregorini (Università degli Studi di Milano-Bicocca)*

Interpersonal synchrony is a key interactional feature that sustains the formation of relational bonds and prosocial behaviors. This interactive mechanism concerns aspects of interpersonal cooperation and mutual adaptation that are essential for successful interactions. Since the role of behavioral synchrony in psychotherapy is still unclear, we systematically reviewed the literature and meta-analytically computed the overall effects. We aimed to analyze the strength of the relationship between the behavioral synchrony patient-therapist and the overall therapeutic process and the role of the type of the psychotherapeutic approach as the moderator in this relationship. The selected studies included a quantitative measure of behavioral synchronization and a measure of patients' therapeutic alliance ( $k=10$ ) or a measure of therapeutic outcome ( $k=8$ ). The random-effects model indicated that synchronized interactions had a small effect ( $r=0.10$ , 95% CI [-0.06, 0.26]) on the perceived alliance and a medium-size positive effect ( $r=0.29$ , 95% CI [0.08, 0.49]) on the therapeutic outcome. The therapeutic approach did not moderate these associations. These findings suggest that synchronized interactions are associated with the effectiveness of the therapy in reducing patients' symptoms.

## OXYGEN THERAPY AND VENTILATION: THE ROLE OF EXPECTATIONS IN ADHERENCE

*Francesca Grosso (Università Cattolica del Sacro Cuore)*

Understanding the role of psychological factors such as expectations, but also the subjective perception of treatment and disease can be particularly relevant to promoting the informed use of the equipment, optimizing it, and facilitating therapeutic adherence. The objective of the study is to identify and investigate the role of disease expectations in predicting disease development and treatment adherence in patients undergoing oxygen therapy and ventilation. A longitudinal study aimed at assessing the relationships between disease expectancy, subjective perception of treatment, and other psychological factors such as anxiety depressive symptoms, quality of life, optimism, and cognitive flexibility. Inadequate levels of adherence, in addition to compromising treatment efficacy, are associated with an increase in adverse clinical outcomes and an increase in consumption of healthcare resources with a related increase in healthcare costs. Increased adherence to treatment can improve patients quality of life, impacting the health of the overall population.



## A SCOPING REVIEW TO DETERMINE THE BEST E-SCREENING METHODS FOR PERINATAL MENTAL HEALTH IN CONDITIONS OF CONTINUOUS COVID-19 SOCIAL RESTRICTIONS

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A scoping review was conducted to collect evidence of advantages, barriers and possible operational recommendations for e-screening for perinatal mental health during the COVID-19 pandemic. In February 2022, searches were conducted in PubMed and PsychINFO using COVID-19 as the main keyword. A total of 38 articles in English and Italian were included. Amid ongoing conditions of COVID-19 social restrictions and modifications of healthcare systems, e-screening seems to be the best way to reach people safely while avoiding infection risk and helping healthcare professionals rapidly recognize perinatal women's distress signals. Online screening tools that also include open-ended questions may be available to perinatal women on multiple software and web applications. Women and healthcare professionals alike seem to appreciate perinatal e-screening for its adaptability to mother's life and the possibility to reach a wide range of people. On the other hand, e-screening for perinatal mental health may risk the exclusion of less educated women, and people lacking devices, an Internet connection or the ability to use them. Innovative solutions are needed to make e-screening more accessible.

## QUALITY OF LIFE, BODY PERCEPTION AND CLINICAL SYMPTOM IN WOMEN WITH FIBROMYALGIA: AN EMPIRICAL RESEARCH

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Fibromyalgia symptoms (chronic widespread pain, asthenia, sleep disorders and cognitive impairment) adversely affect the person's physical, psychological and social functioning. Literature reports a link between FM symptoms and low levels of quality of life (Galvez-Sánchez,2020). In addition, the body perception of patients with FM is also negative. This study was carried out on a sample of 233 women with FM (M=45.7; SD=11.7) and aimed to offer an insight into Cross-cutting symptoms, Quality of Life and Body Uneasiness. The sample completed a battery of tests: WHOQOL-BREF; BUT and Adult DSM-5 Self-Rated Level1 Cross-Cutting Symptom Measure. Data analysis revealed the low quality of life values, presence of body uneasiness (GSI=1.23;SD=0.83) and several symptoms were clinically significant (Depression, Anger, Mania, Anxiety, Somatic Symptoms, Sleep Problems, Memory, Repetitive Thoughts and Behaviors, Personality Functioning, Substance Use).Of the latter, Repetitive Thoughts and Behaviors are influenced by Body Uneasiness, which also affects the overall QoL. Finally, QoL correlates negatively ( $p<0.01$ ) with almost all cross-cutting symptoms, which in turn correlate positively ( $p<0.01$ ) with body uneasiness. The women with FM are fragile, we need care and treated with empathy.

## THE ASSESSMENT OF POSITIVE BODY IMAGE IN YOUTH: A PRELIMINARY EXAMINATION OF THE FUNCTIONALITY APPRECIATION SCALE IN ITALIAN NONCLINICAL ADOLESCENTS

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Functionality appreciation is a core facet of positive body image and may be a protective factor for body dissatisfaction and Eating Disorders (EDs). Adolescents are highly vulnerable to body dissatisfaction (Slane et al., 2014), thus understanding the features of functionality appreciation at this age is clinically relevant. This study aimed to preliminary examine the psychometric properties of the Functionality Appreciation Scale (FAS) in a sample of 135 Italian adolescents (49.6% girls, age=11-15). The FAS and measures of body and self-esteem, body surveillance, and ED symptoms were administered. To test the factor structure of the FAS, an Exploratory Factor Analysis (EFA) was conducted. Then, reliability and validity were addressed. The EFA supported the 1-dimensional model of the FAS. The tool also had a good internal consistency ( $\omega=.77$ ). About validity, significant and positive correlations emerged with body and self-esteem ( $r$  ranging from .51 to .59), while significant and negative associations emerged with body surveillance and ED symptoms ( $r$  ranging from -.31 to -.57). Our results seem to support the use of the FAS to assess functionality appreciation in Italian adolescents; the tool may thus be useful to deepen the features of positive body image in such a population.

## THE ACTIVE AND PASSIVE USE OF SOCIAL NETWORKING SITES SCALE (APU-SNS): VALIDATION AND RELIABILITY ASSESSMENT AMONG YOUNG ADULTS

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Research on the use of social networking sites (SNS) is characterized by a paucity of measures evaluating the active and passive use of SNS (multi-platform). Consequently, the aim of the present study was to examine the dimensionality, measurement invariance (i.e. between gender and age), reliability and validity of an existing measurement designed for a platform (Facebook) and now adopted to evaluate active and passive SNS behaviors (APU-SNS). Seven hundred eighty-one participants (523 females, 67.1%; mean age  $23.41 \pm 3.00$  years) were recruited in this study. The validity of the APU-SNS construct was investigated through multi-group CFAs. The APU-SNS showed an excellent fit to data, with a clear four-factor structure. Measurement invariance was established at configural, metric, and scalar invariances across age groups, and at configural and metric levels across gender groups. Internal consistency was also good. Finally, the scale showed significant associations with other measures of internet\SNS use and addiction, attachment styles, personality, and temperament characteristics. These data support the validity of the APU-SNS as a psychometrically-sound and useful tool for the assessment of engagement styles across different SNS platforms.

## CLINICAL-PSYCHOLOGICAL PREDICTORS OF TREATMENT OUTCOME IN PATIENTS WITH CHRONIC PAIN: A LONGITUDINAL STUDY

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**Aims:** To investigate whether and to what extent distress symptoms, self-efficacy, catastrophizing, and alexithymia were predictors of as-usual treatment (TAU) outcomes for chronic pain (CP). **Method:** One-hundred-and-one CP patients were evaluated for distress symptoms, self-efficacy, catastrophizing, alexithymia, quality of life (QoL), and pain using validated scales. The baseline data were collected during the first medical examination (T1) and the follow-up data after 3-months (T2). **Results:** Compared with unimproved patients (56.4%), improved patients (43.6%) had a general improvement in psychological variables, except for alexithymia and mental QoL. Alexithymia (95%CI[1.82-1.98]) and depressive symptoms (95%CI[1.43-1.82]) predicted a change in pain intensity at T2. Self-efficacy and anxiety symptoms were the strongest predictors of pain interference ( $p < .05$ ) and physical QoL ( $p < .01$ ) at T2. Distress ( $p < .001$ ), self-efficacy and catastrophizing ( $p < .05$ ) were also predictive of mental QoL at T2. **Conclusions:** Alexithymia, self-efficacy, catastrophizing, and distress are individual characteristics associated with TAU outcomes for CP. Identifying the psychological features of CP patients can contribute to developing personalized therapies and improving their efficacy.

## PARENTING AND TEMPERAMENT CHALLENGES IN VERY PRETERM CHILDREN WITH INTRAUTERINE GROWTH RESTRICTION

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Infants born following pre- and perinatal vulnerabilities could be perceived as being less rewarding by their parents, who in turn may then display less optimal parental behaviours. Here, we explore whether Intrauterine Growth Restriction (IUGR) adds further challenges for parents to those posed by very preterm (VPT) birth alone, in terms of infant temperament and parenting style. Participants were 284 very preterm infants enrolled in the Evaluation of Preterm Imaging Study (ePrime), 45 IUGR infants and 239 appropriate for gestational age (AGA) peers. Maternal perceptions of infant temperament were collected at 18/24 months, using the ePrime Questionnaire on Infant Temperament, while at 4 years of age parental competencies were assessed using the Parenting Scale and the Cognitively Stimulating Parenting Scale. Results showed that mothers of VPT IUGR infants perceived their offspring as having less easy temperament compared to mothers of VPT AGA infants. VPT IUGR children had a less cognitively stimulating home environment compared to VPT AGA children. These findings indicate that IUGR poses additional challenges to parents of VPT children; therefore effective strategies to support parental functioning and mother-child interactions are suggested.

## WHAT IS HIDING IN OUR PANDEMIC'S DREAMS? UNDERSTANDING DREAMLIKE DIMENSION DURING COVID-19 OUTBREAK

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Three waves of the COVID-19 pandemic have occurred in Italy, restricting the freedom of millions of people, and generating trauma-related affects. Our study is aimed at comparing dreams collected in different waves of the pandemic. Specificity Analysis by T-LAB software was performed in order to identify which key words (i.e., lemmas) are typical in each waves. The over-using of lemmas was detected by chi-squared. Results show different emotional experiences and different ways of lemmas aggregation for each wave. The narratives of dreams collected in the first wave reflect uncertainty resulting from the shock and the traumatic impact of COVID-19 in daily lives, along with bodily anxieties and lack of trust. Dreams collected in the second wave show the symbolic attempt to protect the self against a deadly external threat (e.g., snake, coronavirus), reinforcing boundaries. Dreams of the last phase seem to highlight the presence of a more active and self-assertive position of the self, possibly also related to the vaccination development. Taken together our results give evidence to the original Ferenczian perspective on dreams which conceptualize them as an attempt to elaborate a traumatic environmental situational which compromise the capability of the mind to think.

## THE INTERPERSONAL PSYCHOLOGICAL THEORY OF SUICIDE IN A SAMPLE OF PSYCHIATRIC PATIENTS: A CROSS-SECTIONAL STUDY DURING THE COVID-19 PANDEMIC

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The Interpersonal Psychological Theory of Suicide (IPTS) (Joiner, 2005) is one of the most recent models that can explain suicide risk in psychiatric patients. We investigated the risk factors associated with lifetime suicide attempts (SA) and current suicidal ideation (SI), in 32 psychiatric patients recruited in two therapeutic communities of Lombardy, in Italy. We assessed through questionnaires socio-demographic, clinical, psychosocial and somatic pain measures, testing the differences between subjects with and without lifetime SA and with and without current SI. From the comparison and consistently with the theory, we inserted variables in regressions models. Some of the features (e.g. anxiety, psychological pain and Thwarted Belongingness (TB)) were associated with both SA and SI. Concerning regression models, Survival and Coping Beliefs (SCB) reduced the likelihood of SA and current SI levels. Beyond TB, mental and physical pain, SCB and Perceived Burdensomeness explained respectively 20.8% and 21.8% of the total variance of SI. Significant clinical implications have emerged as the identified suicidal risk factors, according to IPTS, could inform risk assessment, prevention and treatment in psychiatric patients.



## UNDERGOING AND PERPETRATING DIGITAL VIOLENCE: AN EXPLORATORY STUDY ON A SAMPLE OF ITALIAN ADULTS

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This study aimed to exploratorily investigate the rate of digital violence, perpetrated and undergone, in association with the BIG-5 personality traits, also considering gender differences. Italian adults aged 18-73 (N=301; M=26.2±12.5; 77.4% females) completed the Ten Item Personality Measure-10 and an ad hoc online survey evaluating the rate of undergoing and perpetrating: cyberbullism (CB), online harassment (OH), flaming (F), online abuse (OA), non-consensual sexting (NS), cyberstalking (CS), ghosting/orbiting (GO), verbal violence (VV) and doxing (D). Participants reported undergoing more than perpetrating them and that when undergoing CB, OH, F, NS, GO and VV, they were more likely to also perpetrate them. Point-biserial correlations showed a negative association between conscientiousness and perpetrating CB, GO and VV, and undergoing GO; the latter associated with increased neuroticism. As regards gender differences, females undergo a greater rate of OH, F, NS and more intense OA, NS and VV. Males undergo and perpetrate more VV and perpetrate more F and GO. Findings are a first overview of Italian adults' rate of knowing, undergoing and perpetrating digital violence also hinting the value of conscientiousness. Clinical practice should account for gender differences.

## EATING DISORDERS AND DISORDERS OF EMBODIMENT

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The aim of the study was to provide a qualitative analysis of anomalous bodily experiences (ABEs) of persons affected by feeding and eating disorders (FEDs). In particular, this study aimed to refine the description of bodily experiences in persons with FEDs so as to improve their treatment. This is a naturalistic explorative study on a group of 29 patients affected by FED in psycho-therapeutic treatment and 12 healthy controls. We asked the participants to write a letter on the way they experience their body. Later, we analysed their letters by means of consensual qualitative research. All patients reported at least 1 ABE. The main categories identified are (1)body-obstacle (the body interposes between the person and the world); (2)body-tyrant(the body imposes itself on the will of the person); (3)body-hyper-visible (the body is experienced as an exposed object); (4) body-geometric(the body is experienced or associated with a geometric form); and (5)body-numerical (the body is defined by numbers). All these categories are present in the clinical group, and they are absent in the control group. To grasp the experiential nuances of ABEs is relevant to understand the disorder of embodied self-hood and personal identity in these patients and thus to refine clinical treatment.

## THE DAILY INERTIA OF ANGER AND SADNESS ACROSS ADULTHOOD: THE PROTECTIVE ROLE OF REGULATORY EMOTIONAL SELF-EFFICACY

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Emotional inertia (the moment-to-moment persistence of emotional states) is an index of regulatory deficit that has been related to psychological maladjustment. Using ecological momentary assessment, we explored the role of self-efficacy in managing negative affect (SRN) to reduce the inertia of anger and sadness. Data on both emotions were collected 3 times a day over 28 days among 166 British adults (18-85 years; 73% women) with depression ( $n_1=30$ ), physical disability ( $n_2=45$ ), and without clinical issues ( $n_3=91$ ). SRN was collected as a baseline measure. Dynamic Structural Equation Modeling showed stronger inertia for sadness ( $\beta = .31$ ,  $p < .001$ ) than anger ( $\beta = .16$ ,  $p < .001$ ), indicating that peaks in both negative states persisted across a 4-hour time-lag. Notably, the inertia of sadness was buffered by SRN ( $\beta = -.15$ ,  $p = .03$ ): for those adults with high SRN (+1SD), sadness had lower inertia ( $\beta = .27$ ,  $p < .01$ ) compared to those with low SRN (-1SD;  $\beta = .38$ ,  $p < .01$ ). We did not find significant interaction effects of SRN with age and clinical conditions. Hence, the protective effect of SRN was consistent across adulthood and the three groups considered. The implications of these results for planning time-sensitive, micro-interventions to counteract sadness via SRN in everyday life are discussed.

## PSYCHOLOGICAL FACTORS ASSOCIATED WITH CHRONIC PELVIC PAIN: A SYSTEMATIC REVIEW AND META-ANALYSIS

*Chiara Manna (Università Cattolica del Sacro Cuore)*

Chronic Pelvic Pain (CPP) is a multifactorial condition, which affects patient's physical, mental health and quality of life. Previous researches pointed out that the role of psychological factors is bidirectional, since they are involved both in genesis and maintenance of CPP. Recent guidelines recommend to treat these patients through multidisciplinary tailored interventions, nevertheless knowledge about psychological variables involved in this condition is still inconsistent. Evidence about the role of these factors in shaping patient's pain experience can help future researchers to construct suitable interventions. This systematic review and meta-analysis aim to identify the psychological factors strongly associated with pain in patients suffering from CPP. A systematic searches of most relevant databases was performed. The included studies assessed at least one psychological factor and at least one measure of pain as predictors or as outcomes. Results show that various psychological factors are significantly associated with pain in patients with chronic pelvic pain. These factors need to be considered in the management of these patients.

## PREVALENCE OF MENTAL AND PSYCHOSOMATIC DISORDERS IN SYSTEMIC SCLEROSIS PATIENTS

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Systemic sclerosis (SSc), a rare chronic autoimmune disorder, significantly affects physical, emotional, and psychosocial dimensions. The aim of the present study was to evaluate the mental and psychosomatic status of SSc patients. A total of 222 participants (F: 89.2%; age: 58.51±13.83 years) were recruited at the Scleroderma Unit of Rheumatology of the University Hospital Careggi (Florence, Italy). DSM psychiatric disorders diagnoses were assessed via the Mini-International Neuropsychiatric Interview (M.I.N.I.), psychosomatic syndrome diagnoses were assessed via the Diagnostic Criteria for Psychosomatic Research-Revised Semi Structured Interview (DCPR-R-SSI). The MINI showed the presence of at least one current/lifetime psychiatric disorder in 29.3% of patients: Major Depressive Episode (23.4%), Major Depressive Disorder (14.9%), Panic Disorder (12.2%), Generalized Anxiety Disorder (5%) were the most frequent psychiatric diagnoses. More than half (51.4%) of the sample had at least one DCPR-R diagnosis: Alexithymia (27%), Allostatic Load (20.7%), Type A Behavior (13.5%), and Demoralization (10.4%) being the most frequent. Among SSc patients, high prevalence of depressive and anxiety disorders as well as specific psychosomatic syndromes were found.

## NEW TECHNOLOGIES AND NEW ADDICTIONS: SMARTPHONE ADDICTION. A PROPOSAL FOR AN INTEGRATED APPROACH EVALUATED ON PATIENTS WITH CLASSICAL PATHOLOGICAL ADDICTIONS, WITH FOCUS ON FAMILY FUNCTIONING, ADULT ATTACHMENT AND ALEXITHYMIA

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Our study investigates psychological dimensions affecting the onset of smartphone addiction (SA). According to the existing literature, SA isn't included in DSM-5, due to a lack of agreement on definition, official diagnostic criteria and etiologies. We propose to consider the psychodynamic model of addictions, family functioning, adult attachment and alexithymia as factors that interact with the onset of SA. Participant were 50 patients (age:18 - 75) with pathological addictions (alcohol- substances- GAP) from Psychiatry Department of Gemelli Polyclinic in Rome. We use self-report instruments: ABQ; TAS-20; RQ; SAS-SV; FACES-IV. Based on the results, the sample was divided into two groups: subjects with SA and subjects without. Statistically significant differences between the two groups were analyzed using Student T test. Significant correlations were found between subjects with SA and topics: enmeshed family functioning  $p=0.009$ , preoccupied attachment  $p= 0.064$ , alexithymia  $p=0.008$ , difficulty identifying feelings  $p= 0.009$ , difficulty in communicating them to others  $p= 0.032$ , compulsive behaviour and ritualization  $p= 0.029$ . The finds supporting our hypotheses, however, due to small sample size are needed further research to confirm and expand our result also a no clinical sample

## DREAMING DURING COVID-19: THE EFFECTS OF A WORLD TRAUMA

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Given the serious complications that emerged as a result of the pandemic of COVID-19 has been hypothesized as a possible consequence, an increase in the possibility of developing Post-Traumatic Stress Disorder (PTSD) within the general population, with significant implications in dream activity (Frewen, P.A., and Lanius R.A., 2006; Casagrande et al., 2020). The study conducted was carried out in three phases: in the first, participants were provided with information about the purpose and methods of conducting research; in the second phase, each of them, using the Bion model of dream experience as a focus, was asked to write dreams, emotions and free connections/associations related to the dream (Bion, 1980, 1992,1994). At the end of the collection, the texts obtained were analyzed by means of a qualitative analysis carried out using MAXQDA software. The study confirms the computational and exploratory analysis of the text carried out in the research of Pesonen et.al (2020), finding also in our sample the presence of the hypothesized clusters, explaining the manifestation of images related to COVID-19 also within the dream activity that go to recall the symptomatology of PTSD.

## MENTAL HEALTH IN PARENTS OF CHILDREN WITH NEURODEVELOPMENTAL DISORDER DURING THE COVID-19 PANDEMIC: CROSS-CULTURAL FINDINGS

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During COVID-19 pandemic, changes in family routines may have exacerbated behavioral difficulties and parental burden in families of children with NDD. However, little is known about how adjustment to COVID-19 affected parental mental health in these families. Moreover, cross-cultural evidence is lacking. To fill this gap, we asked Italian (N=82), Spanish (N=27), and US (N=31) parents of children with NDD to complete an online survey during the pandemic. A hierarchical regression was performed to examine the predictive effect of sociodemographic and pandemic-related factors, perceived changes in child externalizing behaviors and parental stress, and discontinuity of therapy received by children on parents mental health. No effect of culture, sociodemographic, and pandemic-related factors was found ( $p < .05$ ). Increased parental stress during COVID-19 was associated with changes in child externalizing behaviors ( $p < .001$ ) and predicted higher mental health difficulties ( $\beta = .291$ ,  $p = .003$ ). Discontinuity in therapy showed a marginal significance ( $\beta = .14$ ,  $p = .07$ ). Our results show similar cross-cultural impact of COVID-19 measure on NDD families and highlight the importance of activating telehealth programs to contain the worsening of child symptomatology and support parental mental health.



## THE EPISTEMIC TRUST MISTRUST CREDULITY QUESTIONNAIRE FOR ADOLESCENTS: VALIDATION PRELIMINARY DATA

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Epistemic trust, namely “the trust in the authenticity and personal relevance of interpersonally transmitted knowledge”, has recently been investigated in several studies concerning its clinical and developmental relevance. Campbell and colleagues (2021) operationalized this concept with the development of a self-report measure: the Epistemic Trust Mistrust Credulity Questionnaire (ETMCQ). This measure was developed on an adult population, and preliminary data about the Italian validation confirmed its consistency and structure. The ETMCQ is composed by 15 items divided in three factors: Trust, Mistrust and Credulity. Due to its association with the development of mentalization, which is a protective factor for emotion dysregulation and psychopathology, empirical data about this measure applied in other developmental stages are needed. Our aim was to validate the Italian version of the ETMCQ in a sample of non-clinical adolescents. 200 adolescents (aged 13-19) completed the ETMCQ, and preliminary results confirmed the three-factor structure previously validated. These preliminary data show that ETMCQ could be a reliable measure to assess epistemic trust also in adolescents. However, further studies with wider samples assessing other psychological dimensions are needed.

## YOGA AND PSYCHIATRIC REHABILITATION: AN EXPLORATORY STUDY

*Giacomo Andrea Minazzi (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

In several empirical studies on psychiatric inpatients the Yoga practice has been demonstrated to produce benefits in specific psychiatric symptoms and a general sense of well-being. The project aims to identify possible effects of a group rehabilitation intervention based on the practice of yoga on psychiatric inpatients from As.Fra. Onlus Foundation. About 24 patients participated in groups of 8 to 8 yoga sessions for 8 weeks with a trained conductor. The research design is a quali-quantitative pilot study, with a random subdivision into groups, and assignation to a waiting list for the control group. Before and after the 8 yoga sessions, a semi-structured interview and a battery of self-assessment tests on quality of life, anxiety and depression, outcome measure, and perceived stress were administered. Most of the patients concluded the training with discrete continuity; 1/3 of them asked to keep on practicing Yoga. In the post-intervention interview, most reported benefits regarded self-awareness and self-control in distress situations. More specific statistical-analysis are now in progress. Accordingly to the preliminary results, the intervention has been inserted in the rehabilitation offer of the Foundation as a stable weekly group for 8 patients.

## CLIMATE CHANGE ANXIETY IN ITALIAN EMERGING ADULTS

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Over the years, the issue of climate change (CC) has become increasingly central to political, public, and social debate. Studies have shown that CC is linked to negative emotions in emerging adults (EAs), such as anger, fears, and distress. Moreover, studies have documented a growing number of people showing CC anxiety (CCA), that is, negative cognitive, emotional, and behavioral responses associated with concerns about CC. However, little evidence on the protective/risk factors of CCA is available. This study aimed to investigate the links between CCA and CC awareness, CC experience, behavioral engagement, and cognitive and emotional environmental identity (EID) in a sample of 350 Italian EAs. Pearsons correlation analysis showed that the CCA was significantly ( $p < .001$ ) and positively related to the CC awareness ( $r = .416$ ), the experience of CC ( $r = .602$ ), and the behavioral engagement ( $r = .329$ ). Moreover, the cognitive and emotional EID ( $r = .214$ ;  $r = .499$  respectively) were correlated ( $p < .001$ ) to CCA. The findings suggest that those who feel more identified with nature and are aware of CC impacts experience a greater risk of CCA. Future studies should explore these links further.

## THE ROLE OF PERFECTIONISTIC SELF-PRESENTATION AND PROBLEMATIC INSTAGRAM USE IN THE RELATIONSHIP BETWEEN SELF-CONCEPT CLARITY AND BODY DISCONNECTION: A SERIAL MEDIATION MODEL

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In recent years, problematic use of social networking sites (SNSs) has received increasing scientific attention as a potential behavioural addiction. Among SNSs, Instagram provides the possibility to fully manage the information shared with others (e.g., by manipulating one's own photos) and to understand what is the ideal way to present oneself in order to gain approval. For this reason, the current study hypothesized that low self-concept clarity (SCC) will have a positive effect on perfectionist self-presentation which, in turn, will lead to problematic Instagram use (PIU). Moreover, it was hypothesized that the tendency to present oneself as perfect via Instagram will may lead to detach from one's physical body (BD) via PIU. 219 women (M age= 31.8 + 11.25) completed an online survey that included the Italian versions of the Perfectionistic Self-Presentation Scale, the Scale of Body Connection and the Bergen Facebook Scale modified for Instagram use. A Serial Mediation Model (Hayes's PROCESS Model 6) shows that both PSP and PIU significantly serially mediate the association between SCC and BD ( $\beta = -.03$  SE = .011, 95 % CI = [-.0502, -.0070]), but no mediating effect of PSP between SCC and BD was found ( $\beta = -.053$  SE = .031, 95 % CI = [-.1191, +.0052]). Results are discussed.

## ASSESSING TRANSPLANT REPRESENTATION: PSYCHOMETRIC CHARACTERISTICS OF THE TRANSPLANTED ORGAN QUESTIONNAIRE IN AN ITALIAN SAMPLE OF TRANSPLANT RECIPIENTS

*Benedetta Muzii (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Transplant is a first-rate treatment for organ failure; notwithstanding the physical recovery, organ transplantation elicit complex emotional responses, up to out-to-out psychopathological symptoms (Dew et al. 2015, De Pasquale et al. 2020); indeed the experience of receiving an organ can be a hard emotional path that could lead to poor psychological integration, a risk factor for health outcomes and non-adherence (Goetzmann et al. 2018; Látos et al. 2022). The aim of this study is to assess the psychometric characteristics of the Transplanted Organ Questionnaire (TOQ – Corruble et al., 2012), in a sample of 107 solid organ transplant patients (51M; 55F; 1NB; Mage 32,28,  $\pm$  12). TOQ and Brief Symptom Checklist (Derogatis, 1993) were administered in 2022. Through a Confirmatory Factor Analysis we highlighted that the three-factor model proposed by Corruble et al. (2012) fitted the data; after checking the factor loadings, items were deleted in cases of poor loading. The result consists in a three-factor model; indices of goodness of fit are discussed. Predictive validity indicates that these dimensions are significantly correlated with mental health outcome measures. This study can provide clinicians and researchers with a pilot tool to assess the representation of the transplant.

## IS LEARNED HELPLESSNESS RELATED TO THE QUALITY OF RELATIONSHIPS WITH PARENTS?

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According to Interpersonal Acceptance-Rejection Theory (IPARTheory), the quality of interpersonal relationships with important others can influence individual psychological adjustment. In this perspective, it is possible to hypothesize that the quality of interpersonal relationships with caregivers is associated with the learned helplessness. Starting from those consideration, the association between recollections of maternal and paternal rejection in childhood and learned helplessness in adulthood were investigated. A short version of the Learned Helplessness Scale was adapted to Italian and administered to 114 adults (18-25 years, 67.5% females) in combination with two Parental Acceptance-Rejection Questionnaires (mother and father). Results confirmed a significant and positive association between recollections of both maternal ( $r = .53$ ;  $p < .001$ ) and paternal ( $r = .36$ ;  $p < .001$ ) rejection and learned helplessness and clarified that only maternal rejection was associated with learned helplessness in a specific way ( $\beta = .49$ ;  $p < .001$ ). Results are consistent with IPARTheory which assumes that parental rejection is related to adult psychological adjustment and that the effect of the relationship with the mother is different from the effect of the relationship with the father.

## PREDICTORS OF MENTAL AND SEXUAL HEALTH AFTER COVID19 PANDEMIC IN A GROUP OF MSM LIVING WITH HIV

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The present study aims to identify the main predictors of mental and sexual health in a group of Italian men who have sex with men (MSM) living with HIV about two years after the pandemic. A total of 115 MSM living with HIV completed an anonymous web survey in collaboration with PLUS Roma. BSI-18 mean scores for all the areas and the Global Severity Index (GSI) were higher than normative scores, indicating a relevant presence of symptoms in the group. Poorer HAART adherence, HIV personalized stigma, internalized sexual stigma, and difficulties in processing emotions emerged as significant predictors of worse mental health. The model was significant ( $F(6,100)=11.902$ ;  $p<.001$ ) and accounted for 41.7% of variance explained. An increase of porn use was showed in association to higher GSI levels. Lower socioeconomic status, depression, isolation, HIV personalized stigma, internalized sexual stigma, and difficulties in processing emotions were significant predictors of poorer sexual health outcomes. The model was significant ( $F(6,108)=6.943$ ;  $p<.001$ ) and accounted for 27.8% of variance explained. Factors emerged suggest areas for prevention and empowerment projects, such as intersectionality between HIV stigma, sexual stigma (homophobia) and isolation from the LGBT+ community.

## THE FAMILY CAREGIVING ENVIRONMENT ASSOCIATES WITH ADOLESCENT PATIENTS' SEVERITY OF EATING DISORDER AND INTERPERSONAL PROBLEMS

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The quality of the care environment and family interactions may be a critical factor associated with restrictive eating disorders (REDs) in adolescents. In this study, 60 adolescent patients completed the EDI-3 questionnaire to quantify the severity of REDs using the composite scores Eating Disorders Risk (EDRC) and Interpersonal Problems (IPC). In addition, patients and their parents participated in a validated observational procedure (Lausanne Triadic Play clinical version, LTPc) and patients interactional behaviors were coded as participation (PA), organization (OR), focal attention (FA), and affective contact (AC). A significant association emerged between patients interactional behaviors during the LTPc triadic phase and both EDRC and IPC. Specifically, patients better OR and AC emerged as significantly correlated with lower EDRC severity and IPC. These findings suggest that investigating the quality of patients' family relationship and interactive behaviors may help to better identify adolescent patients at higher risk for more severe RED and interpersonal problems. A family-centered approach to the diagnosis of RED may facilitate more effective preventive interventions.



## INTERPERSONAL SYNCHRONY: TOWARD A DEEPER CHARACTERIZATION OF THE FEMALE AUTISM PHENOTYPE

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Females with ASD present different symptoms manifestation and camouflage mechanisms. This, combined with the under-investigation of the female phenotype, constitutes a major issue for early diagnosis. Given that also recent reviews highlight the need to focus on behavioural measures and narrower constructs to study gender differences, we investigated interpersonal synchrony. 51 therapist-child dyads, 25 female and 26 male pre-schoolers (mean age = 43.67 months;  $sd=13.02$ ), participated to our study. 20-min recordings of dyadic interactions during the administration of the ADOS-2 were quantitatively analyzed using the Synchrony Coding System. Despite no significant differences in clinical tests (GMDS-ER and ADOS-2), females were diagnosed significantly later than males. During the interaction, females were more responsive and showed more synchronous behaviours, with a higher degree of reciprocity. Further, their interplays lasted longer, appeared to be more engaging and were more often adequately concluded. Finally, therapists' expansions were more, and more effective. Our findings highlight the importance of studying interaction variables since females may present a better social functioning that might mask their difficulties and lead to a later diagnosis.

## ONE-YEAR TREATMENT IN A THERAPEUTIC COMMUNITY FOR YOUNG ADULTS WITH DRUG ADDICTION: EXAMINING CHANGE AND RETENTION IN TERMS OF SYMPTOMATOLOGY AND PERSONALITY FUNCTIONING

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Substance use Disorder treatment poses significant challenges, especially in the case of youth who face severe drug addiction to the extent of being admitted to residential facilities. The study aims to examine which changes in symptomatology and personality occur throughout one-year of Therapeutic Community and to investigate drop-outs. A group of young adults diagnosed with severe Substance Use Disorders was assessed at admission (N=147), after 6 (N=83) and 12 months (N=50), using the Symptom Checklist-90-R self-report to investigate symptomatology and the Shedler-Westen Assessment Procedure-200 item (SWAP-200) clinician-report for personality functioning. Data, analyzed using non-parametric tests, indicated significant changes in all SCL-90-R scales and total scores and in several dimensions of personality functioning. Patients who drop out showed higher symptom intensity and higher levels of antisocial and histrionic traits at initial assessment, while patients who stay in treatment presented higher levels of obsessive, avoidant and narcissistic traits. Early and late drop-outs could not be differentiated. In conclusion, data suggest an overall improvement, both in patients' and clinicians' evaluation, and the contribution of SWAP-200 in discriminating drop-outs.

## YOUNG ADULTS WITH DRUG ADDICTION AND PSYCHOTHERAPY: A FOCUS ON THERAPEUTIC RELATIONSHIP AND ITS DEVELOPMENT IN THE CONTEXT OF RESIDENTIAL TREATMENT

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In drug addiction treatment, therapeutic relationship seems to play an important role and this might be the case especially for young people, who are difficult to engage and maintain in treatment. The study examines the quality and evolution of therapeutic relationships in young adults in a therapeutic community setting. Therapeutic relationship (TR) was investigated at admission (N=67), 6 months (N=43) and 12 months (N=26), assessing working alliance (Working Alliance Inventory, patient and therapist forms), transference (Psychotherapy Relationship Questionnaire) and countertransference (Therapist Response Questionnaire). Higher levels of working alliance than expected were detected since the initial step, especially regarding the bond scale and according to therapists' evaluation; transference and countertransference patterns are overall reported as positive. During treatment a significant improvement is reported for all 3 relationship dimensions. TR could not identify patients who leave treatment early and only marginally distinguishes late drop-outs, which are characterized by weaker alliance and higher levels of helpless/inadequate countertransference. In conclusion, TR seems to be positively characterized, but its role in treatment outcome should be furtherly examined.

## THE RELATIONSHIP BETWEEN CHILD MALTREATMENT, HEART RATE VARIABILITY, AND NON-VERBAL BEHAVIOUR

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Child Maltreatment (CM) is associated to a lifelong psychopathological risk, with the occurrence of psychiatric disorders and an increased risk of premature death, probably for the chronic activation of the endocrine system and the autonomic nervous system (ANS). An index of ANS modulation is heart rate variability (HRV). CM also causes interpersonal dysfunctions, which could be investigated through the study of non-verbal behaviour. The aim is to explore whether there is a relationship between CM, different levels of HRV and non-verbal behaviour during dyadic interviews. Participants were 55 healthy young adults. They filled out a battery of questionnaires to assess the presence of CM. They underwent measurement of resting HRV and were subjected to a videotaped neutral interview for the assessment of non-verbal behaviour. Participants with severe CM showed altered levels of HRV, and altered patterns of non-verbal behaviour: who experienced physical abuse tended to disengage from the social interaction; who reported physical neglect exhibited displacement behaviours; victims of emotional abuse had the tendency to “freeze” themselves. This study could help the assessment of clinical data, in order to develop effective treatments and personalized prevention protocols.

## THE USE OF PROJECTIVE GRAPHIC TECHNIQUES IN SCHOLASTIC CONTEXT FOR THE EVALUATION OF SCHOLASTIC INTEGRATION AND EMOTIONAL COMPONENTS OF GROUP- CLASS

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In the last decades many studies have been emphasizing the role of emotion related attributes on psycho-educational processes during childhood, such as scholastic integration. Emotional variables in childhood can be assessed through projective graphic techniques, as they allow children to use kinetic components of the draws to communicate emotions as dreamlike images. The aims of the present study are: 1) to explore how graphic techniques evaluate children's emotional state and integration; 2) the extent to which such techniques are sensitive to assess children's individual differences from primary to secondary school. The Drawn Stories Technique and the Classroom Draw were administered to a total of 1757 children from both primary (N=1270) and secondary (N=487) schools. Preliminary results showed that males expressed significant more emotional turbulence and distress, which were signed as "Negative Outcomes" in the Drawn Stories Technique, both in primary ( $p < 0,01$ ) and secondary school ( $p < 0,05$ ) than females. Scholastic integration, was positively related with age in secondary school ( $p < 0,05$ ) and negatively but not significantly in primary school ( $p > 0,05$ ). This study underlines that graphic techniques are useful to assess the class-group emotional climate and children's integration.

## INFANT-DIRECTED SPEECH TO PRETERM INFANTS: THE INFLUENCE OF THE SEVERITY OF PREMATURITY AND MATERNAL DEPRESSIVE SYMPTOMS

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Preterm birth represents a risk factor for maternal perinatal depression and the quality of early dyadic interactions (Agostini et al., 2014; Neri et al., 2015). However, only few studies explored effect on interactive exchanges, including maternal verbal input (Herrera et al., 2004; Suttora & Salerni, 2011), and no one considered severity of prematurity. The study aimed to explore infant-directed speech (IDS) to preterm infants, comparing dyads of Extremely Low Birth Weight (ELBW; <1000 gr.), Very Low Birth Weight (VLBW; 1000-1500 gr) and Full-Term (FT) babies. At 3 months postpartum 60 mother-infant dyads (15 ELBW, 15 VLBW, 30 FT) were recruited and participated in a 5 min free interaction. Lexical, syntactic, and functional features of maternal input during the interaction were analyzed using the CHILDES software. All mothers completed Edinburgh Postnatal Depression Scale (Cox et al., 1987). Results revealed a higher proportion of questions directed to ELBW infants compared to FT ones ( $p=0.046$ ). Also, the degree of lexical variability was higher in non-depressed compared to depressed mothers ( $p=0.047$ ), but only in ELBW dyads. Despite preliminary, findings suggest the need to monitor the influence of severity of prematurity and its interaction with maternal depression on IDS.

## DOES NARCISSISM INFLUENCE SHARENTING? AN EXPLORATORY STUDY

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Sharenting means the increasing parents attitude to share online children's information and pictures. It refers to a new and unexplored Internet-related behavior, which is gaining growing interest. Recently, sharenting has been addressed as a form of digital narcissism that may involve privacy issues suggesting the need for further investigation. The aim of the current study was to explore the association between parents' narcissism and sharenting, investigating the predictive role of vulnerable/grandiose narcissism, preference for online self-presentation and privacy concerns on two facets of parental sharenting, i.e. the attitude to online sharing personal experiences as a parent, and child's photos/information. Two linear regression models were tested. A total of 256 Italian parents (87,5% female;  $M = 46.05$  years) participated in the study. Results showed that grandiose narcissism and the perception of freedom in online self-presentation positively predicted both the facets of sharenting. On the contrary, vulnerable narcissism, privacy concerns and parents/child's age negatively predicted sharenting. These preliminary findings suggest a reflection on the psychological functioning associated to this new online behavior, encouraging further exploration on its implications.

## PSYCHOLOGISTS' REPRESENTATIONS ABOUT THEIR PROFESSIONAL FUNCTIONS WITHIN ITALIAN ASSISTED REPRODUCTIVE TEAMS

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In order to promote the implementation of specific Italian guidelines for psychological care during Assisted Reproductive Treatment (ART), the study aimed to analysis mental representations of psychologists working in ART clinics regarding their functions and roles. Five focus groups with 28 psychologists were conducted. The text was analysed using emotional text mining (ETM). Analysis showed four clusters of representations from psychologists: 'Clinical Practice with the patient', that reflects the practical functions of psychologist who works with patients; 'To place psychology within the treatment', representing the possibility of re-thinking the placement of a psychologist's work within ART team; 'Psychologist's loneliness', describing the emotional dispositions of psychologists related to difficulties in working within the clinic, in finding solutions and space; 'Collusion with medicine', representing the psychologists' tendency to adapt their expertise and activities to the medical process. The results of the present study highlight the need to define psychologists' functions and operational levels of psychology. To build a clinical practice based on multidisciplinary work still appears to achieve.



## LOVE IN THE TIME OF COVID-19: THE NEGATIVE EFFECTS OF THE PANDEMIC ON PSYCHOLOGICAL WELL-BEING AND DYADIC ADJUSTMENT

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The present study aimed to explore the impact of COVID-19 on mental health and dyadic adjustment in people who were in a stable relationship during the second wave. A total of 410 participants were asked to fill in sociodemographic and COVID-19-related information, STAI-Y1, BDI-II, PCL-5, and DAS. Chi-squared tests revealed the presence of significant differences between the three subgroups of participants (reporting positive, negative or none impact of COVID-19 restrictions on their relationship) on children ( $p=.001$ ) and current job status ( $p=.03$ ). Univariate ANOVAs showed a significant difference between those three groups on age ( $F(2, 198.74)=13.974, p<.001$ ), relationship duration ( $F(2, 193.80)=14.719, p<.001$ ), and all psychological variables [STAI-Y1,  $F(2, 407)=7.627, p=.001$ ; BDI-II,  $F(2, 407)=12.563, p<.001$ ; PCL-5,  $F(2, 198.03)=8.409, p<.001$ ; DAS,  $F(2, 407)=12.314, p<.001$ ]. These findings show that people who declared a negative impact of the COVID-19 outbreak on their relationship were younger, reported greater anxiety/depressive symptoms and PTSS, a shorter relationship duration, and a lower dyadic adjustment than the other groups. Furthermore, a high prevalence of participants who reported a negative impact had no children and were not working due to the pandemic.

## DON'T STO(M)P THE MUSIC

*Chiara Rossi (Università Cattolica del Sacro Cuore)*

The last decade has seen increasing research about the use of music and its effects on well-being. Individual differences, such as personality traits, may play a key role in modulating the emotional response to music. The present study aimed to validate the Italian version of the Short Test of Music Preferences with the goal of exploring the relationship between personality traits and music propensity. 2104 participants completed an online survey that included the Italian Short Personality Inventory, and the Short Test of Music Preferences. Findings suggested that exists a latent 5-factor structure underlying preferences and personality traits. The factors were labeled as follows: 1) Mellow & energetic defined by electronic/dance, alternative, and new age; 2) Unpretentious & conventional including pop and international/foreign; 3) Sophisticated & unconventional comprising blues, jazz, soul R&B, and funky; 4) Intense & rebellious consisting of heavy metal, punk, and rock; 5) Complex and contemplative including opera, religious, and classical music. Their initials form the acronym MUSIC. This starting point could serve to generate new theories and hypotheses in order to use music listening and music preferences in therapeutic contexts for promoting mental health and general wellbeing.

## STRUCTURAL STIGMA AND BISEXUAL+ PEOPLE: EFFECTS OF THE REJECTION OF THE ZAN BILL IN ITALY ON MINORITY STRESS AND MENTAL HEALTH

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Bisexual+ people experience forms of structural stigma that are associated with negative mental health outcomes, such as anxiety, depression, and suicidality. In order to eradicate hate crimes against LGBT+ people, on the 4th of November 2020, the Italian deputy Alessandro Zan proposed a Bill entitled “Measures to prevent and combat discrimination and violence on grounds of sex, gender, sexual orientation, gender identity and disability” (i.e. “Zan Bill”). On October 27, 2021, the Italian Senate silenced the Bill. This study aimed to explore how the rejection of a civil rights law affected the well-being of Italian bisexual+ people. Specifically, it was investigated whether a worsening in mental health before and after the Zan Bills rejection occurred. Data from 299 bisexual+ people after the Zan Bill’s rejection were compared with data on the same measures from 381 bisexual+ people before the Zan Bill’s rejection. T-test statistics showed a worsening in the levels of discrimination, binegativity, anxiety, depression, and resilience after the rejection of the Zan Bill. Outness remained unchanged in the two groups. Results suggested the rejection of the Zan Bill has had a strong effect on the well-being of Italian bisexual+ people.

## CHASING BEHAVIOR, DECISION-MAKING STYLES AND CRAVING AMONG ADULT HABITUAL GAMBLERS

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Chasing involves continuing gambling to recoup previous losses. Though it is one of the few observable signs for disordered gambling and plays a key role in its maintenance, experimental research on chasing behavior remains still scarce. This study investigated the interplay between chasing, decision-making styles, and craving among habitual players. A sample of 150 adults completed the South Oaks Gambling Screen (SOGS), the General Decision-Making Style (GDMS), the Gambling Craving Scale (GACS), and a computerized task assessing chasing. Participants were randomly assigned to two chasing conditions (Control/Loss). Hierarchical linear regression analysis showed that the Dependent decision-making style was negatively associated with chasing, whereas male gender, gambling severity, expected relief, and Loss condition were positive predictors of chasing proneness. Results indicated that the relief associated with gambling, gambling severity, and loss condition contribute significantly to chasing frequency, whereas searching for advice and guidance of others when making decisions seems to be a protective factor against chasing. Our findings suggest that clinical interventions on gambling disorder should consider the interplay between individual decision-making styles and chasing.

## MUSCLE DYSMORPHIA, ORTHOREXIA, AND PERFECTIONISM IN A CROSS-CULTURAL STUDY

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Muscle dysmorphia (MD) is a common condition of pathological dissatisfaction among gym participants, characterized by the belief that individuals appear small and weak despite being physically large and muscular. In addition, personality traits such as perfectionism and individuals eating attitudes are often associated with MD. Until now, there has been relatively little research published about MD across cultures. The aim of the present study is to investigate similarities and differences between Italian and Turkish gym participants regarding muscle dysmorphia, perfectionism, and orthorexia. Participants were 52 Italian (Mage=28.54, DS=5.34, M=27) and 135 Turkish (Mage=24.99, DS=5.38, M=133) gym participants completing self-reports assessing muscle dysmorphia, orthorexic tendencies, and perfectionism. The multivariate model was statistically significant ( $\lambda=.417$ ,  $p<.001$ , partial  $\eta^2=.583$ ). Univariate comparisons indicated that the Turkish group showed more orthorexic behaviors, greater functional impairment, more other-oriented and socially prescribed perfectionism and less self-oriented perfectionism than the Italian group. The results show interesting cultural differences and provide new insight into MDs understanding and its related features in cross-cultural samples.

## SIBLINGS: A NEW DEFINITION OF BROTHERS AND SISTERS IN PEDIATRIC PSYCHOLOGY

*Maria Angela Seccia (Lumsa Università di Roma)*

A childhood chronic health condition may have psychological implications for the whole family. Recently, researchers have increased attention to its impact on siblings. This research aims to gain an understanding of the current literature about the impact of a childhood chronic illness or disability on siblings, the factors related to their mental health and the intervention programmes. The databases Google Scholar, Pubmed and PsycInfo were systematically searched. A total of eight studies met the inclusion criteria: they were systematic reviews, meta-analyses and experimental studies published in the last ten years with siblings 0-18 as participants. Five categories of consequences were identified: somatization, emotional effects, relational and psychological problems, positive effects. Furthermore, different types of risk factors and protective factors were found. The most common interventions adopt a family-centered-care model and they mainly consist of group interventions and empowerment experiences. This overview highlights the need to extend the research for the psychological impact of a chronic health condition on siblings, especially in Italy. In fact, knowing their experiences and coping strategies may be useful to ensure more tailored interventions.

## POSTPARTUM DEPRESSION AND NEUROTICISM: EXPLORING RELATIONSHIP IN A PANDEMIC PERIOD

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Neuroticism, a personality trait characterized by disposition to experience negative emotion, sadness, anger, and anxiety, is a possible factor related to postpartum depression. Our study investigates the prevalence of postpartum depression in a pandemic period and the relationship between neuroticism and depressive symptoms after delivery. Neuroticism subscale of NEO Five Factor Inventory was used to assess neuroticism of 1541 women in the 3rd trimester of pregnancy. The Edinburgh Postnatal Depression Scale (EPDS) was used to explore depressive symptoms within 7 days of delivery. Data were analyzed using descriptive methods, independent T-test, and Pearson correlation. The prevalence of postpartum depressive symptoms (EPDS total score  $\geq 12$ ) in our sample was 9%. The mean score on Neuroticism was 14.70 ( $\pm 7.30$ ). Women with EPDS scores  $\geq 12$  showed higher scores on Neuroticism ( $r = .3984$ ,  $p < .0001$ ). The t-test analysis confirmed that patients with EPDS score  $\geq 12$  reported significant higher scores than others on neuroticism ( $21.25 \pm 0.7915$  vs  $14.13 \pm 0.1819$ ;  $p < 0.0001$ ). Our findings are useful in clinical practice. Personality traits can impact treatment. Moreover, clinician may need to treat the patient's personality to the extent that the current depression is secondary to the neuroticism.

## EARLY EVIDENCE OF THE INTERPLAY BETWEEN SEPARATION ANXIETY SYMPTOMS AND COVID-19-RELATED WORRIES IN A GROUP OF CHILDREN DIAGNOSED WITH CANCER AND THEIR MOTHERS

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Childhood cancer is a risk factor for separation anxiety symptoms, which can worsen the psychological well-being, especially if COVID-19-related concerns are present. The research explores the interplay between separation anxiety symptoms and COVID-19-related worries in pediatric cancer patients and their mothers, compared to healthy children and mothers, during the pandemic. Thirty-three subjects with cancer, aged 7–15, and their mothers were compared to a control group of 36 healthy children and caregivers. A pandemic and psychological experience survey and standardized questionnaires assessing psychological well-being, anxiety, and separation anxiety symptoms were administered. Clinical children reported higher prosocial behaviors, fear of being alone and abandonment. Their mothers displayed worse psychological well-being, higher COVID-19 concerns, anxiety, and separation anxiety symptoms. As for the regression model, greater children's separation anxiety symptoms were associated with younger age, more recent diagnosis, more mother-child time, lower mothers' worry for child's contagion, higher mothers' and child's anxiety. Mothers COVID-19-related worries may be protective for clinical youths' psychological well-being. Early support interventions for mothers are essential.



## THE IMPACT OF ANTENATAL DIAGNOSIS OF CLEFT LIP AND PALATE ON MATERNAL'S REPRESENTATIONS AND WELLBEING DURING PREGNANCY

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The prenatal announcement of a cleft lip and/or palate (CL/P) represents a very delicate moment for the parents. The purpose of this study is to identify maternal working internal models of the child and psychological wellbeing in mothers of infants diagnosed with a CLP. Mothers who received antenatal diagnosis of CL/P (n = 17) and mothers who did not receive any kind of diagnosis (n = 20) were assessed in terms of maternal representations (IRMAG, Ammaniti et al., 2001) and psychopathological symptomatology (SCL-90-R, Derogatis, 1983). Mothers' distress caused by the diagnosis was also measured in the CL/P group through the IES-R (Weiss et al., 1996). The distribution of categories of maternal representations was different between the two groups, with higher distribution of insecure representations in the CL/P. Mothers who received antenatal diagnosis of fetal malformation showed higher psychopathological symptomatology and significant levels of post-traumatic distress. Findings inform the need to anticipately investigate maternal representations and wellbeing in the presence of CL/P diagnosis in order to target specific intervention for parenting support prior to child's birth

## TARGETING NEUROMODULATION EFFECTS IN THE INSULAR CORTEX: A TMS/FMRI COMBINED STUDY TO INCREASE INTEROCEPTIVE AWARENESS

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Mounting evidence supports the role of the insular cortex in interoceptive awareness (IA; the awareness of one's own visceral signals), the lack of which is considered a transdiagnostic risk factor for psychopathology. However, if and to what extent is it possible to modulate insular activity and modify individuals' IA is still unknown. Transcranial magnetic stimulation (TMS), including theta-burst stimulation (TBS) protocols, has proven an effective method to non-invasively modulate cortical regions activity, producing facilitatory (iTBS) or inhibitory (cTBS) effects. By combining TBS with fMRI, we hypothesized that iTBS and cTBS would affect the insular activity and, consequently, IA. cTBS, iTBS, and sham stimulations were administered over the right anterior insular cortex (rAIC) of 20 healthy individuals. After stimulation, participants performed an IA task and were scanned while viewing disgusting or neutral images. We found preliminary evidence indicating changes in rAIC activation following the TBS sessions. Given the growing use of TMS protocols in psychiatry, current results could be used to inform the conduction of clinical trials, with the ultimate goal to harness scientific advances to select treatment options with the greatest likelihood of success.

## POSTTRAUMATIC SYMPTOMATOLOGY AND EMOTION DYSREGULATION IN WOMEN VICTIMS OF PSYCHOLOGICAL VIOLENCE

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Intimate partner violence (IPV) corresponds to any behaviours that cause sexual, psychological and physical harm to a person exerted by a current or former partner (Krug et al., 2002). Psychological violence represents a subtype of IPV, and it is highly widespread in Europe: 32% of women seems to have been subjected to this kind of violence by a partner (EUAFR, 2014). Despite that, the conceptualization of the phenomenon is still not clear and research in this field is lacking. The objective of the present research is to contribute filling this gap in literature by investigating the consequences of psychological violence on its victims. The sample comprises 547 women (mean age = 40,46, SD = 11,76) recruited from 24 Antiviolence centers in Italy. Results show that these women present statistically significant higher levels of posttraumatic symptomatology and emotion dysregulation compared to a control group. Moreover, the feeling of terror and the posttraumatic symptomatology seem to significantly mediate the relationship between psychological violence and emotion dysregulation experienced by these women. Consequently, clinical interventions for victims of psychological violence should be developed targeting these psychological constructs.

## A CLINICAL COMPARISON, SIMULATION STUDY TESTING THE VALIDITY OF THE INVENTORY OF PROBLEMS-29 (IOP-29) AND INVENTORY OF PROBLEMS-MEMORY (IOP-M)

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In forensic evaluations, clinicians must decide whether a given symptom presentation is bona fide or non-credible. As such, the validity of the tests used to assess the credibility of symptom presentations should be analyzed thoroughly. The current study aimed at testing the validity of the Inventory of Problems-29 (IOP-29), a self-administered measure of symptom validity and credibility, and the Inventory of Problems-Memory (IOP-M), a forced-choice, implicit recognition task, by conducting a clinical comparison, simulation study. Forty patients suffering from the schizophrenia spectrum and other psychotic disorders were asked to take the tests honestly and 40 healthy individuals, matched by gender and age to the patients, were asked to feign a psychotic disorder. Both the IOP-29 and IOP-M showed very large effect sizes (i.e.,  $d > 1.9$ ). Moreover, IOP-29  $FDS \geq .50$  produced  $Se = .87$ ,  $Sp = .85$ , and  $OCC = .86$ , and IOP-M # of correct items  $< 30$  produced  $Se = .85$ ,  $Sp = .85$ , and  $OCC = .85$ . Including the IOP-M yielded increased specificity and OCC, reaching .90 and .88 values, respectively. Overall, the results indicate that using both the IOP-29 and IOP-M provides increased classification accuracy rates compared to using the IOP-29 alone.

## EXAMINATION OF THE WRITING TESTS OF CHILDREN WITH SLD IN TERMS OF PROCESS AND PRODUCT

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Several studies have analysed the writing process through computerized digital tools to better understand the writing action in its quality of a psychomotor act. This study aims at evaluating the process and product of writing in children with SLD. BHK test was administered through the software for kinematic analysis of writing CSWin to sixteen children with SLD aged from 8 to 15 years at the Developmental Age Service in the area of Feltre (BL). In this way, it was possible to record the writing movements in terms of time of execution, writing frequency, writing speed, pressure exerted on the sheet and number of speed reversals (NIV). Main results showed marked difficulties in this clinical population for several writing parameters, especially in males who obtained worse performances (p-value <0.01 for the parameter ambiguous forms of letters; for the remaining parameters p-value <0.05). There is a significant negative correlation between the BHK left margin not aligned scale and the CSWin parameter writes a lot. A positive correlation was found between retouched and traced letters of the BHK and the NIV. The tools for kinematic analysis of writing can be very useful both in the diagnostic and in the treatment phase by increasing readability and fluency.

## THE ROLE OF PEER SUPPORT IN THE TREATMENT OF ABNORMEL EATING FUNCTIONING: A PILOT STUDY

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We describe the rationale of action research project #DicciComeAiutarti (#DCA). The aim of this project is to explore the impact that online peer support (OPS) plays for individuals with diagnosis or problems related to eating disorders (EDs). In first step we developed an Instagram profile to collect data about OPS in online social groups. Data from 213 users (Mage=23.37, SD=6.32) showed that perceived sadness (25.7%), bad day experiences (49.2%) and low self-esteem (54.4%) are the main motivations that lead individuals to search OPS. Moreover, those who rated that OPS played a crucial role in their EDs are people who reported higher levels of depression ( $F=3.86$ ;  $p=.02$ ) and stress ( $F=4.49$ ;  $p=.01$ ). Based on these first results, the second step was to develop an action plan to provide peer&professional online support. We enriched the Instagram profile with psychoeducational contents (i.e. narratives of people who recovered from an EDs, importance and ability to change, nutrition management) aimed to increase the motivation for treatment and EDs awareness. No. of followers, messages and comments are being used in this step to perform quali-quantitative analysis. Results from #DCA will determine whether a larger clinical trial is justifiable and feasible for future interventions.

## ADOLESCENTS AT THE TIME OF COVID-19: SOCIAL MEDIA USE AND SOCIAL WELL-BEING

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COVID-19 pandemic had several negative sequences in adolescents' mental health: greater worry, irritability, influence on lifestyle and on sleep, psychopathology (i.e., Magson et al., 2020). Social networks (SNs) were mostly used to have information and to keep in contact. This study aims to evaluate social media use, impact of COVID-19 and social anxiety in adolescents. 150 adolescents were recruited. Their mean age was 17.78 (SD = 0.97; range: 15-19), mostly females (60.3%). Frequency and reasons of SNs use, SAS-A and CEFIS-AYA were administered to adolescents through an online secure survey during spring 2021 after the signature of consent form by their parents. Results identified a great use of instant messaging platforms and of new platforms, such as TikTok, especially in adolescents aged 15-16.11 years old ( $F_2 = 12.76$ ;  $p = 0.0001$ ) comparing with the older ones aged 19 years old (Mean difference = -21.16;  $p = 0.0001$ ). The principal motives of use were boredom (54.8%), to keep in touch with friends 43.8% and to communicate with friends (40.5%). A negative correlation was found between social anxiety and exposure to COVID-19 ( $r = -0.18$ ,  $p = 0.009$ ). This information could be helpful to set up specific psychological interventions.

## PSYCHOLOGICAL HEALTH OF BREAST CANCER SURVIVORS: EFFICACY OF A GROUP WEB-BASED MIND-BODY INTERVENTION

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Breast cancer lived experience and combined medical treatments could lead to psycho-physical side effects, and rehabilitation phase is a particularly concerning time for patients to restoring well-being and full participation in life. In this scenario, mind-body interventions could have a key-role to improve health in everyday life. Ten-week web-based group sessions of guided practices for reworking trauma and postural exercises with a certified specialist, and an available monitored group chat with a trained-psychologist were structured between March and June 2021. The program was proposed to potential participants identified in a public hospital and a non-profit association for breast cancer survivors (BCSs) active in Lombardy. Autonomous BCSs aged  $\leq 80$  and fluent in Italian were eligible. Exclusion criteria included pathologies affecting the CNS (i.e., dementia or neurodegenerative diseases) and ongoing psychiatric disorders. After signing the informed consent, N=16 BCSs were enrolled. Distress (HADS), individual and dyadic coping strategies (Mini-MAC; DCQ), trauma reworking skills (PACT), and body image (BIS) were assessed at baseline (T0) and post-test (T1). Non-parametric Wilcoxon test showed the efficacy ( $p < 0.05$ ) of the protocol in improving the general well-being of BCSs.



## PSYCHOLOGICAL AND BEHAVIORAL CHARACTERIZATION OF ADOLESCENTS WITH SUICIDAL IDEATION AND PARASUICIDAL BEHAVIORS

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We conducted a clinical cross-sectional study to better characterize the features most associated with the realization of an actual suicidal attempt. We recruited 88 adolescents aged 12-18 years (extremes included) who presented only suicidal ideation or even suicidal behavior, assessed with the semi-structured interview Columbia-Suicide Severity Rating Scale - Children Baseline Screening (C-SSRS). We divided participants in two groups according to the C-SSRS: 1) adolescents with a history of suicidal behavior (SB), 2) adolescents with wish to be death and/or active suicidal ideation but no suicidal behavior (NSB). We found that the SB group showed greater severity of suicidal ideation, higher levels of subjective depression, and a higher prevalence of personality disorders compared to the NSB group. The NSB group exhibited non-suicidal self-injury more frequently than the SB group. Both groups presented a prevalence of internalizing problems compared to the externalizing ones at the Youth Self-Report 11-18 questionnaire (YSR). Higher scores on YSR internalizing problems correlate positively with the Repulsion by Life subscale of the Multi-Attitude Suicide Tendency (MAST) Scale in both SB and NSB groups, and negatively with the MAST Attraction to Life subscale in the SB group.

## THE EFFECTS OF SHAME PRONENESS ON THE PATHWAY BETWEEN DYSFUNCTIONAL PARENTING AND ADDICTION IN YOUNG ADULTHOOD

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The present study was designed to test the hypotheses that an increased level of dysfunctional parenting was predictive of the severity of addictive behaviors in young adulthood and that this pathway was mediated by shame proneness. An online survey was performed using the Guilt And Shame Proneness scale to assess shame proneness, the Measure of Parental Styles to assess dysfunctional parenting, and the brief Screener for Substance and Behavioral Addiction to assess the severity of addiction both substance and behaviors related. The final sample consisted of 710 participants. The hypotheses were tested using two structural equation models. The structural equation models obtained a good fit and evidenced the predictive role of the perceived dysfunctional parenting on the severity of the addiction. Moreover, two dimensions of shame proneness mediated the association in different ways. Specifically, the tendency to withdraw positively mediated the association, on the contrary, the tendency to make negative self evaluation negatively mediated the association. Findings highlighted that the different aspects of the shame proneness could mediate the association between dysfunctional parenting and addiction, acting as a risk or a protective factors.

## COPING WITH DISABILITY DISORDERS IN FAMILY

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Development disabilities are several psychophysiological conditions emerging during childhood. Having a child with severe disability is influenced by socioeconomic status of family on sharing the responsibility on them. Several studies focus on difficulties parents and children face living with a sibling with disability, with both negative and positive effects. This study investigates coping strategies of families living with a child with disability. It looks that family member tends to show introverted, stigmatized, and guilty in society. The methodology of this study includes literature review of studies focusing on self-concept changes, analysing stress levels, positive feelings towards life, hopelessness, severity of the disorder, etc. It emerges that having relevant age difference between siblings helps in their adaptation as caregivers and grows their sense of responsibility and competence. This research could help improve the panoramic of families with a disability child to promote improved wellness.

## HAS COVID-19 PANDEMIC WORSENERD QUALITY OF LIFE OF PATIENTS WITH INFLAMMATORY BOWEL DISEASE? A LONGITUDINAL DISEASE ACTIVITY-CONTROLLED STUDY

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Inflammatory bowel disease (IBD) is a chronic intestinal disease of unknown etiology characterized ulcerative colitis (UC) and Crohns disease (CD). The most common acute symptoms are abdominal pain, blood in the stool, and diarrhea. The development of anxiety and depression in patients with IBD can have an effect on quality of life. In our study, we recruited a sample of 233 patients with IBD during the first peak of the COVID-19 pandemic (March 2020 to May 2020) and 221 approximately 1 year after completing the first questionnaire. We expected that HRQL would be associated with disease activity and probably COVID-19 pandemic-related-distress and that the pandemic epidemic might represent an additional independent factor of psychological distress affecting HRQL over time in all patient groups. Our results showed that during the two different phases of restraint, the HRQL had been modified by disease-related factors rather than by COVID-19-related posttraumatic symptoms. The finding that COVID played a negligible role in IBD-related HRQL could be explained by the evidence that social withdrawal and staying at home are already a daily problem for IBD patients because of specific symptomatology.

# Psicologia dello Sviluppo e dell'Educazione

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# CHILDREN'S BEHAVIOURS, WELLBEING, AND FUNCTIONING DURING COVID-19: THE ROLE OF PARENTS

*Proponenti: Daniela Bulgarelli (Università degli Studi di Torino), Marcella Caputi (Università di Trieste)*

The COVID-19 pandemic, the related lockdowns and new habits had an impact on children and adolescents' everyday life and, consequently, on their psychological development, as recently highlighted by a systematic review run on 116 studies (Samji et al., 2022). Our symposium, chaired by Bulgarelli and Caputi, aims at addressing the role of parents in shaping the impact of the pandemic on children's behaviours, wellbeing, and functioning, both in typical and atypical development. Bulgarelli, Bianquin, Barron & Emmett discuss the role of parents on outdoor play of children with and without disabilities. Molina, Monetti, Sangiorgi, Caputo, Ferrero & Marcone present the role of parents and siblings on preschoolers' play. Nicoli, Spinelli, Lionetti, Logrieco & Fasolo introduce the role of parents on adolescents' emotional and behavioural well-being. Caputi, Giani, Forresi & Scaini explore the role of parental stress in the link between children's emotional and behavioral difficulties and their resilience with a 3-wave study.

## OUTDOOR PLAY OF CHILDREN WITH AND WITHOUT DISABILITIES DURING COVID-19 LOCKDOWN: THE ROLE OF PARENTS

*Daniela Bulgarelli (Università degli Studi di Torino), Nicole Bianquin (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Carol Barron (Dublin City University, Ireland), Mary-Jane Emmett (Dublin City University, Ireland)*

Several factors might affect outdoor play: individual and family aspects, neighbourhood environment, policy, socio-cultural factors (Boxberger & Reimers, 2019; Sallis et al. 2006). According to the ICF (WHO, 2007), the COVID-19 lockdowns could have been barriers to outdoor play (Kovacs et al. 2021) and had a greater impact on children with disabilities. Meanwhile, contextual factors such as parents' role and features of the outdoor could have been facilitators for play (Brockman et al. 2011). An online questionnaire was spread in Ireland and Italy in May 2020, to collect parents' views on their children's play. Parents of 594 typically-developing children and 43 parents of children with disabilities filled in the questionnaire. A content analysis was run on the open-ended question "Which was the best idea you (parent) had to enable your child's outdoor play?". The active role of parents in organizing routines and spaces, introducing novelties and innovations in play, and the existing features of the built environment were facilitators for children's outdoor play. No differences in outdoor play emerged between children with and without disabilities, and in the strategies that their parents used to support it. Differences related to age, gender, and nationality will be discussed.

## PARENTAL FLOODING AS MEDIATOR IN THE RELATIONSHIP BETWEEN CHILDREN EMOTIONAL/BEHAVIORAL DIFFICULTIES AND RESILIENCE IN TIMES OF COVID-19

*Marcella Caputi (Università di Trieste), Ludovica Giani (Sigmund Freud University Milano), Barbara Forresi (Sigmund Freud University Milano), Simona Scaini (Sigmund Freud University Milano)*

With a 3-wave study, we explored whether parental stress during COVID-19 pandemic helps to shape the link between child emotional and behavioral difficulties and resilience. A survey targeting Italian families with children aged 5-10 years was conducted online. Time 1 (June 2020) was completed by parents of 158 children (48% boys, mean age = 7.4 years; SD = 1.8 years); 68 and 49 parents respectively completed Time 2 (December 2020) and Time 3 (June 2021). We hypothesized that parental ability to handle family conflicts would mediate the relationship between children's difficulties and their resilience in the unfolding of the pandemic. Results of mediation analyses showed that Time 1 child difficulties were associated with Time 2 higher parental flooding ( $b = -.45$ ,  $s.e. = .22$ ,  $p = .04$ ) and Time 2 high parental flooding was related to Time 3 decreased child resilience ( $b = .09$ ,  $s.e. = .04$ ,  $p = .03$ ). The direct effect of early children's difficulties on their later resilience was not significant ( $b = -.08$ ,  $s.e. = .07$ ,  $p = .23$ ), as parental flooding fully mediated their relationship ( $b = -.09$ ,  $s.e. = .05$ , 95% C.I. =  $-.1993$ ,  $-.0052$ ). Knowing that children's difficulties interact with parental stress in determining resilience during stressful periods can guide tailored interventions.



## PRESCHOOL CHILDREN'S PLAY DURING A LOCKDOWN: SIBLING'S AND PARENT'S RELATIONSHIPS

*Paola Molina (Dipartimento Interateneo di Scienze, Progetto e Politiche del Territorio, Università di Torino), Alessandra Monetti (Dipartimento di Psicologia, Università degli Studi di Torino), Elisa Sangiorgi (Dipartimento di Psicologia, Università degli Studi di Torino), Simona Giuseppina Caputo (Dipartimento di Psicologia, Università degli Studi di Torino), Sonja Ferrero (Dipartimento di Psicologia, Università degli Studi di Torino), Maria Teresa Marcone (Dipartimento di Psicologia, Università degli Studi di Torino), Loredana Versace (Dipartimento di Psicologia, Università degli Studi di Torino)*

Our research aims at exploring the effect of the lockdown on children's play, using a qualitative approach, necessary in the first steps of studying a new and unexpected experience. In Italy, the COVID19 pandemic abruptly modified the everyday experience of parents and children, affecting children's play as well. We explored the overall children's experience, via the parent's words. Sixteen semi-structured online interviews were conducted during June and July 2020 with parents of eighteen 5-year-old children (9 girls, 3 dizygotic twins) attending preschool during the year 2019-20. We utilized the "interview d'explicitation" methodology (Vermersch, 2005). The analysis was conducted through a content analysis of the transcribed protocols. A consent form and information sheet were provided to all participants, after authorization from the school. The research project was approved by the Turin University CBA (Ethics Committee). Preliminary results highlight the different approaches to play during the lock-down, considering the presence of siblings and the parent's availability as well: when similar age siblings were present in the family, the lockdown experience intensified the relationships; when no sibling was present, the role of available parent became more important.

## PROTECTIVE AND RISK ACTIVITIES FOR EMOTIONAL AND BEHAVIORAL WELLBEING OF CHILDREN AND ADOLESCENTS DURING COVID-19 LOCKDOWN

*Ilaria Nicolì (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara), Giulia Carlotta Guerra (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The lockdown brought deep changes in the daily life of children and adolescents, highly incrementing the home time. This study aims to explore how activities performed by children and adolescents during the lockdown were related to their emotional and behavioral wellbeing. Parents completed an anonymous online survey on how much time their children and adolescents dedicated to time on social networks, solitary screen time, play time and different parent-child dyadic activities. They also reported on their offspring's emotional difficulties and behavioral problems. Results evidenced that the use of social networks seems to have a negative effect on children's emotional difficulties, while a protective effect on adolescents. Children and adolescents who spent more time on solitary screen activities presented more behavioral problems. Get along with the parent was associated with less emotional difficulties and behavioral problems in children, and with less behavioral problems in adolescents. For adolescents the more they talked with the parent, the less behavioral problems they evidenced. This study may help to identify activities that should be promoted and those that should be limited to effectively manage home time, and to safeguard the emotional and behavioral wellbeing.

## NUMERICAL COGNITION: FROM 0 TO 6

*Proponente: Daniela Lucangeli (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Numerical and arithmetic abilities have a strong impact in daily life, in fact, we use them to manage money, to set the table, to remember the code of our phone, to indicate where to live, etc. The literature shows that there is a growing interest on the basic mechanisms that regulate the development of competence. However, as of today, there is no univocal consensus on the skills that could be predictive and decisive in the development of arithmetic skills. Much of the literature agrees to assert that early numerical experiences and personalized interventions can favor subsequent scholastic success. It is then necessary to take into consideration the interaction between basic cognitive mechanisms, didactic and extracurricular experiences, to understand the development of numerical cognition. Starting from this assumption we ask: how can we evaluate numerical skills in early age? What empowerment activities can we carry out to facilitate future academic success? The present symposium aims to generate a discussion between methods and research results that intertwine experimentation and the consequent learning aspects.

## A NOVEL SCALE TO ASSESS EARLY NUMERACY

*Francesco Sella (Centre for Mathematical Cognition, Loughborough University, UK), Daniela Lucangeli (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Children rapidly increase their numerical knowledge during preschool, moving from an approximate number sense to acquiring exact symbolic numerical knowledge. In this talk, we will present the development of a novel scale to assess number knowledge in preschool children. We will summarise the theoretical background behind the selected numerical tasks and present the first results on an Italian sample. The scale entails tasks to evaluate number acuity, enumeration, number reading, cardinality, successor and predecessor knowledge, ordinality, number comparison, and simple arithmetic. Most of the tasks present items of increasing difficulty starting with small numbers and going up to 20 and a stopping rule after multiple wrong answers. These characteristics make the scale sensitive to detect children with a wide range of abilities while keeping the assessment time short to facilitate the use of the scale both for educational and research purposes.

## VISUO-SPATIAL AND MATHEMATICAL TRAINING ON THE IMPROVEMENT OF MATHEMATICAL SKILLS IN KINDERGARTEN

*Maria Lidia Mascia (Università di Cagliari), Annamaria Porru (Università degli Studi di Padova), Mirian Agus (Università di Cagliari), Maria Pietronilla Penna (Università di Cagliari)*

The literature agrees on the usefulness of combining visual-spatial and numerical trainings in fostering the development of numerical skills from early childhood (Praet et al., 2014; Yang et al., 2020). The following results highlight the effect exerted on the enhancement of mathematical skills by a combined numerical and visual-spatial training, presented in a paper-pencil format, in subjects attending the last year of pre-school. Participants (54 children divided in experimental and control group) were examined in three distinct moments (pre, post and follow up) using standardised tools for the evaluation of numerical and visual-spatial abilities. The training lasted 3 months with 12 meetings. A MANCOVA was applied. Significant differences were found between the experimental group and the control group. The experimental group showed significant effects in relation to the improvement of numerical skills (in the lexical, semantic, counting and pre-syntactic areas) and the improvement of visual-spatial activities, which was also confirmed at the time of the follow-up carried out 6 months after the end of the training.

## AN EVALUATION OF 4-YEARS-OLD UNDERSTANDING OF ZERO

*Giulia Vigna (Leiden University, Netherlands), Laura Bassi (Università degli Studi di Padova), Natalia Reoyo-Serrano (Università degli Studi di Padova), Silvia Benavides Varela (Università degli Studi di Padova)*

This study aimed to analyze (1) to what extent preschoolers understand the meaning of zero, and (2) whether zero and the other numbers share common prerequisites. Twenty 4-year-old children completed (a) Give-N task, and (b) non-symbolic comparison of quantity, both with and without zero. In addition, we assessed participants' skills regarding (c) naming numbers, (d) language comprehension abilities, and (e) representation of numbers on fingers. We observed that all children understood what the word "nothing" means, but only 55% of them were able to link "zero" to "nothing" (Zero-knowers). This suggests a difficulty in understanding the lexical rather than the semantic meaning of zero. In addition, Zero-knowers got higher scores than Zero-not-knowers in the tasks (c), (d), and (e), but we did not find such differences between Cardinality knowers Vs children who had not acquired the Cardinality principle. This suggests that the cardinality of zero and other numbers may be acquired in different ways. Finally, we did not find any differences between Zero-knowers and Zero-not-knowers regarding the performance in the non-symbolic tasks with empty sets. Being able to link zero to nothing and representing zero on a continuum with the other numbers might be two independent skills.

## NUMERICAL ABILITIES AND FINGER-REPRESENTATION IN TODDLERS: A PILOT STUDY

*Annamaria Porru (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Silvia Benavides-Varela (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Daniela Lucangeli (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Several studies have shown that the use of fingers in preschool number competitions is a significant predictor of subsequent numerical and arithmetic skills. However, it is not clear at what point in development the link between finger representations and numerical skills emerges. The participants were 35 monolingual Italian children (male = 49%) aged from 18 to 36 months ( $M = 29.71 + 5.4$ ). They completed tests of emerging mathematics tapping into One-to-One Correspondence, Ordinality, Arabic knowledge, Cardinality, and Enumeration. The children were also assessed for their ability to represent numbers with their fingers (finger-number knowledge) and to successfully match verbal and finger expressions when telling their age (finger-age). Pearson correlations indicate that the finger-age is positively associated with Enumeration ( $r = .577, p < .000$ ), One-to-One Correspondence ( $r = .392, p < .02$ ), and Cardinality ( $r = .535, p < .01$ ). No other correlation reached statistical significance. The results indicate that a relation between finger representations and specific numerical abilities can be observed earlier than previously demonstrated. Therefore, embodied numerical representations can serve as a window to observe and strengthen the early numerical abilities of the children.

# THEORY OF MIND DURING PRIMARY SCHOOL YEARS: INDIVIDUAL DIFFERENCES AND DEVELOPMENT

*Proponenti: Serena Lecce (Università di Pavia), Ilaria Castelli (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

This symposium focuses on theory of mind (ToM), defined as the ability to attribute mental states to predict social behavior, during primary school years in typically developing children. The first two contributions focus on individual differences in ToM. The work by Ronchi, Devine, and Lecce focuses on role of the social context and shows that the diversity in classmates' ToM level predicts children's individual ToM over one year. The contribution of Margoni focuses on moral judgment and highlights links between epistemic trust and intentions attribution also highlighting interesting developmental effects. The remain two contributions examine developmental changes. Massaro, Peretti, Cangelosi, Itakura, Kanda, Ishiguro, and Manzi provide data showing that children's attribution of mental states to humanoid robots changes in the early school years depending on the features of the robot. Finally, Lombardi, Bianco, Valle, and Castelli examine the possibility of supporting children's' ToM development, in particular second-order false belief understanding, via a dedicated training program.



## CLASSMATES' THEORY OF MIND: DOES IT PREDICT CHILDREN'S INDIVIDUAL MENTALIZING SKILLS?

*Serena Lecce (Università di Pavia), Luca Ronchi (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia), Rory Devine (Università di Birmingham, UK)*

Social models of Theory-of-Mind (ToM) posit that peer interactions contribute to the development of mindreading skills. Our aim was to extend these accounts by examining the link between classrooms socio-cognitive profile and individual differences in ToM during middle childhood. We collected data from 527 children (249 girls,  $M_{age} = 9.74$ ,  $SD = .98$ , range = 7.95 – 12.47 years) attending 24 primary school classes (Year 3, 4, 5 and 6) and adopted multilevel analyses to examine whether the overall level of classmates' ToM (median score) and/or the variety of classmates' ToM scores (interquartile range - IQR) predicted individual differences in children's ToM (Strange Stories and Silent Films) one year later. Results showed that the variability (but not the level) of ToM in the classroom positively predicted later ToM ( $\beta = .13$ ), controlling for previous children's ToM score, age, verbal ability, SES, gender, special education needs, social isolation and classroom's size. This effect was not moderated by the level of the child's ToM, indicating that children benefit from being in classrooms where classmates' ToM are heterogeneous, regardless from their own ToM skills. The results highlight the role of diversity in the classroom context as a source of development for ToM.

## THE PROMOTION OF SECOND-ORDER FALSE BELIEF UNDERSTANDING IN CHILDREN AGED 7/8

*Elisabetta Lombardi (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Federica Bianco (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Annalisa Valle (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Ilaria Castelli (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Given the importance of Theory of Mind (ToM) for children's socio-cognitive adjustment, the issue of how to prompt children's ToM at school has started to attract researchers' attention. This study aimed to promote second-order false belief understanding (II-order-FBU) in children attending Grade 2 by designing a training program based on narratives followed by multiple-choice questions and mental-states conversations. Participants were 57 children (M age = 7.65 years; SD = 4.13 months), assigned to either the experimental (28 children, 13 boys) or to the control condition (27 children, 11 boys). At pre-test the two groups did not significantly differ for control variables (SES, reading comprehension, verbal ability, and executive functioning),  $t(53) \geq 0.05$ ,  $.19 \leq ps \leq .96$ , and for both II-order-FBU and Advanced ToM,  $ps \geq .144$ . The experimental group improved II-order-FBU skills significantly more than the control group,  $F(1, 53) = 4.44$ ,  $p = .040$ . The benefits of the training program extended to metacognitive knowledge and advanced ToM, elucidating mechanisms of acquisition in the domain of meta-representation. Our findings suggest that it is possible to enhance II-order-FBU through activities that are easily incorporable into daily instructional activities.

## HOW CHILDREN'S EPISTEMIC TRUST IS AFFECTED BY THEIR ASSESSMENT OF MENTAL STATES UNDERLYING PAST ACTIONS OF INFORMANTS

*Francesco Margoni (University of Oslo, Norway)*

Research shows that children older than 5 years integrate information about agents' mental states in their judgments: When asked to say whether an agent is good or bad, they rely more on the agent's intentions than on the outcomes caused by its action. Here, we asked whether and how children's epistemic vigilance is influenced by intentions and outcomes related to informants' prior actions. Children aged 6 to 10 years were first presented with two puppets and asked to judge them. One puppet was shown to accidentally cause harm (neutral intention, negative outcome), the other attempted but failed to harm (negative intention, neutral outcome). Almost all the children judged based on intentions, evaluating the accidental wrongdoer as good and the other puppet as bad. Next, the puppets became informants and gave contrasting testimonies about the color of a third puppet's ball and about whether the third puppet was good or bad. Whereas most of the children, irrespective of age, trusted more the accidental wrongdoer's testimony about the color of the ball, we detected a significant increase in the tendency to trust more the accidental wrongdoer on the assessment of the third puppet's moral character. These results reveal important changes in mental state reasoning during school age.

## MENTALIZATION IN CHILD-ROBOT INTERACTION: EXPLORING CHILDREN'S MENTAL STATE ATTRIBUTION TO DIFFERENT HUMANOID ROBOTS

*Davide Massaro (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Giulia Peretti (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Angelo Cangelosi (Department of Computer Science, University of Manchester, Manchester, UK), Shoji Itakura (Centre for Baby Science, Doshisha University, Japan), Takayuki Kanda (Department of Computer Science, Kyoto University, Japan - Advanced Telecommunications Research Institute International, IRC/HIL, Keihanna Science City, Japan), Hiroshi Ishiguro (Advanced Telecommunications Research Institute International, IRC/HIL, Keihanna Science City, Japan - Department of Adaptive Machine System, Osaka University, Japan - Department of Systems Innovation, Osaka University, Japan)*

Social robots are increasingly being employed in everyday activities. Among these, educational practices represent those that attract great interest given their crucial role in the growth of a society. How to develop robots that should have educational purposes is the subject of debate. In fact, the presence of human physical features could lead children to anthropomorphize robots. This study focuses on the possible inclusion of robots in mentalization processes. We compared the attribution of mental states by 5-, 7- and 9-year-old children to two humanoid robots, NAO and Robovie, which differed in the degree of anthropomorphism. Results on the attribution of mental states according to age and robot type show that 5-year-olds tend to anthropomorphize robots more than older children, independently of robot type. While 7- and 9-year-olds, compared to younger children, attributed more mental characteristics to NAO than to Robovie, although they attributed similar mental characteristics to both robots as humans. Age-related differences showed that, for older children, robots with more human-like characteristics increased their mentalistic perception. These findings provide important insights regarding the use of robots as mediators in educational relationships.

# COGNITIVE, LINGUISTIC AND EMOTIONAL- RELATIONAL PROCESSES IN BILINGUAL CHILDREN AND MONOLINGUAL PEERS: RECENT RESEARCH RESULTS

*Proponenti: Giulia Vettori (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Lucia Bigozzi (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

The increasing diverse linguistic backgrounds of children raises questions about which factors might sustain their school well-being and learning. This symposium brings together recent research results about cognitive, linguistic and emotional-relational processes in bilingual and monolingual populations in different ages promoting theoretical development and practical implications. In the 1st communication the focus is on cognition and emotions: Cangelosi et al. have investigated the effect that emotionality of the words has on verbal false memories in L2 in diverse bilingual populations. In the 2nd communication the focus is on language development: Bello et al. have investigated children's expressive vocabulary in the early life phase exposed to L1-minority and L2-Italian. In the 3rd communication the focus is on oral and written language: Vettori et al. have investigated the relations between oral narrative competence, spelling, and written narrative competence in primary school mono- and bilingual children. In the 4th communication the focus is on social competence: Dicaldo et al. have investigated the relations between vocabulary, inhibitory control, theory of mind, emotional regulation, and teacher-rated social competence in primary school mono- and bilingual children.

## L1 AND L2 EXPRESSIVE VOCABULARY OF PRESCHOOL CHILDREN FROM MIGRANT FAMILIES IN ITALY: LINGUISTIC PROFILES AND DETERMINANT FACTORS

*Arianna Bello (Università degli Studi Roma Tre), Paola Ferraresi (Università degli Studi Roma Tre), Paola Perucchini (Università degli Studi Roma Tre)*

The present study investigates the expressive vocabulary of 60 children (age: 36-62 months), exposed to L1-minority and L2-Italian. The aims are the following: i) to describe the lexical profile in the two languages; ii) to understand which aspects of linguistic exposure affect the expressive vocabulary. The results show that 91% of children has vocabulary skill in L2 more advanced than in L1, and almost  $\frac{1}{4}$  of them are identified with low lexical competence in L2. Regression analysis shows that lexical competence in L1 is influenced by the parental use and the child use of L1 at home, and by the parent-child involvement in 'high level' linguistic activities (reading books, telling stories and songs). The expressive vocabulary in L2 is influenced by how long the child attends the preschool service (nursery/kindergarten) and by 'high level' linguistic activities at home among children and parents (reading books, telling stories and songs). In conclusion, it is confirmed that the quantity and quality of exposure of L1 at home is crucial for the child L1 development, while for the child L2 development are significant the length of exposure of L2 in the preschool context and the home practices that actively promote the L2.

## FALSE MEMORIES OF EMOTIONAL WORDS AS A KEY FOR UNDERSTANDING SEMANTICS IN BILINGUALS

*Martina Cangelosi (Università di Pavia), Paola Palladino (Università degli Studi di Foggia)*

The aim of the present project is to disentangle the effect that emotionality of the words has on verbal false memories in the second language of two different populations of bilinguals, namely bilingual children speaking a minority language as L1 and speaking Italian as L2, and bilingual adults living in Bozen, speaking German as L1 and Italian as L2. Verbal false memories are measured through the DeeseRoedigerMcDermott (DRM) paradigm. It consists in presenting participants with some lists of words all semantically related to a not present theme (called “critical lure”). It is likely that participants will also remember the critical lure as if it would have been part of the coded lists, in light of semantic processing. Emotionality of the words proved to boost this semantic processing, in light of the “priority of elaboration” that the more emotional words acquire. Our two populations differ with respect to their socioeconomic (SES) and linguistic status. Participants belonging to the former have a low SES as an average and their languages are not supported by their social context. Participants belonging to the latter have a high SES as an average and their language is highly supported by their social context. Our results largely changed depending on these differences.

## SOCIAL COMPETENCE IN BILINGUAL CHILDREN: RELATIONSHIP WITH EXECUTIVE FUNCTIONS, THEORY OF MIND AND EMOTION RECOGNITION

*Raffaele Dicataldo (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Ughetta Moscardino (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Irene Mammarella (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Maja Roch (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Social competence is a multidimensional construct that refers to the effectiveness in social interactions to achieve personal goals through the capacity to initiate and maintain positive social relationships. Bilingual children, unlike their peers, are exposed to different linguistic and sociocultural contexts and therefore must deal with different cultural norms and conform their behaviors to social expectations. The study of social competence correlates, particularly among children exposed to multiple languages, is relevant for promoting a full socio-linguistic integration. Language skills, executive functions, and theory of mind (ToM) have been found to relate to social competence in childhood. Yet, there is limited research examining the effect of emotion recognition (ER) and whether language status (mono vs bilingual) moderates these relationships. We investigated the associations between vocabulary, inhibitory control (IC), ToM, ER, and teacher-rated social competence in 321 mono- and bilingual children attending primary schools in Northern Italy. Results indicate that language status moderates the relationships of ER and IC with social competence. Bilingual children with higher IC and ER skills also show better social competence, regardless of their language level.



## THE RELATIONS BETWEEN ORAL NARRATIVE COMPETENCE, SPELLING SKILLS, WRITTEN NARRATIVE COMPETENCE IN BILINGUAL AND MONOLINGUAL CHILDREN

*Giulia Vettori (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Lucia Bigozzi (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

Contributo per il SIMPOSIO PROPOSTO DA: Vettori G. & Bigozzi L. (FORLILPSI-Unifi) Previous studies show that oral language and spelling skills are critical to writing. Few studies have investigated these skills in BLM children. The present study investigated the pattern of relationships between oral textual narrative competence, spelling skills, and written textual narrative competence in monolingual and BLM children. A total of 141 primary school children aged 7-11 years participated in the research. Each child scored for oral and written narrative textual competence, spelling accuracy in dictation, and spelling accuracy in written texts. The hierarchical regression results show that in BLM children, narrative orthographic accuracy is the best predictor of written narrative textual competence; thus, adequate performance in written narrative texts depends on higher orthographic skills in story writing. In monolinguals, oral narrative textual competence solely predicts written narrative textual competence, and this relation varies with children's age. These findings suggest that BLMs' lower textual structure in written text is associated with their difficulties in mastering L2 orthographic level.

## PROTECTIVE FACTORS OF DISTRESS IN STUDENTS DURING COVID-19 PANDEMIC

*Proponente: Luana Sorrenti (Università degli Studi di Messina)*

COVID-19 restriction lead schools and universities to canceled activities/lessons to minimize gatherings and hence decrease transmission of the virus. Consequently, students switched to the online system. The closure of schools and universities and the stress related to the lockdown experience impacted on academic performance, social relationships, and subjective well-being, favoring the development of psychological distress and emotional vulnerability, anxiety, boredom, loneliness and low expectations about the future. These difficulties were also highlighted in high school students, especially in students with learning difficulties. Much of the psychological literature has analyzed individual factors that play a protective role in stressful situations for individuals, promoting their subjective psychological well-being. Positive Psychology shown that optimism, academic motivation, self-efficacy, grit, and resilience represent some protective factors in reducing distress and mental health troubles. Therefore, it is assumed that students with such individual characteristics may have faced the hardships due to the pandemic without serious repercussions on academic performance and subjective psychological well-being.

## RESILIENCE AS A PROTECTIVE FACTOR OF NEGATIVE EMOTIONALITY AND DISTRESS IN A GROUP OF ITALIAN UNIVERSITY STUDENTS

*Natale Salvatore Bonfiglio (Università di Pavia), Dolores Rollo (Dipartimento di Medicina e Chirurgia, Università di Parma), Roberta Renati (Università di Pavia), Maria Pietronilla Penna (Università di Cagliari)*

Psychological distress and emotional vulnerability have been considered negative consequences determined by the COVID-19 pandemic and related to variables such as anxiety, boredom, loneliness and low expectations about the future. Several studies have shown that psychological resilience has been one of the useful protective factors in reducing the negative consequences due to the pandemic. The aim of the present study is to assess well-being, negative psychological consequences, emotional vulnerability, emotional regulation and resilience in a sample of 88 University students scattered throughout the Italian country through an online platform during lockdown (T0; April-2020) and at term (T1; May-June-2020). Significant differences were found between T0 and T1 for the stress variable and negative affectivity using ANOVA. These differences vanish when using resilience as a covariate. No significant differences were found for the dimensions of anxiety, well-being, and positive affectivity. The results demonstrate a tendency for the students to be aware of and in control of negative emotionality, although they still experienced the negative consequences. Resilience, moreover, was shown to be a key protective factor in reducing the negativity of the emotional experience.

## ACADEMIC MOTIVATION AND SELF-EFFICACY IN LEARNING STRATEGIES OUTCOMES IN UNIVERSITY STUDENTS DURING COVID-19 PANDEMIC

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During the COVID-19 lockdown, students switched from the traditional educational system to the online system. The epidemic impact on college students' academic outcomes has received little attention. A survey study on a sample of 1069 undergraduates, with a mean age of 21.72 years, attending online university courses during the pandemic (from March to May 2021) was performed. Following SDT, the current study aims at analysing whether different individuals' orientations in academic motivation (autonomous regulation vs controlling regulation) would mediate the linear associations between self-efficacy (SE) and learning strategies (LS). Results showed that SE was positively associated with LS and academic motivation. The academic motivation was positively associated with LS. The level of academic motivation of students, as autonomous regulation, mediated the relationship between SE and LS. Findings highlight how being an autonomous and regulated student creates a virtuous circle between SE and LS, positively affecting academic achievement even in stressful conditions. The evidence reinforces the need to provide university students with regular counselling services to deliver psychological support through different modalities, from platforms consultation to online workshops.

## PARENTAL SHAME, GUILT AND NEED FRUSTRATION IN HOMEWORK STRESS: A COMPARISON AMONG LEARNING DISABILITIES AND TYPICALLY DEVELOPMENT STUDENTS

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The few studies examining homework parental involvement with Learning Disabilities (LD) students revealed the tendency to adopt intrusive practices, which, in turn, exacerbate students' need frustration, independent homework management and avoidance of challenging tasks. Moreover, parents of LD students in comparison with parents of Typically Development (TD) students show lower self-efficacy, higher shame, guilt, and adoption of controlling strategies to foster student learning and avoid criticism. This study examined the relationships among parental guilt, shame, need frustration, and homework stress in students with LD or TD and their parents. 108 parent-child dyads (54 LD, 54 TD) filled in questionnaires to assess homework stress, parental need frustration, guilt, and shame. Parents of LD students reported higher levels of stress, need frustration, shame, and guilt than parents of TD students. Parental shame mediated the association between parental need frustration and parental and child stress in the LD group, whilst parental guilt mediated the association between parental need frustration and parental stress. Results highlight the importance of enabling parents to experience less need frustration and shame while involved in homework.

## THE MEDIATING ROLE OF OPTIMISM AND RESILIENCE IN THE ASSOCIATION BETWEEN COVID-19-RELATED STRESS, SUBJECTIVE WELL-BEING, HOPELESSNESS, AND ACADEMIC ACHIEVEMENT IN ITALIAN UNIVERSITY STUDENTS

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Restriction due to COVID-19 leads universities to canceled lessons and turned to online teaching. Those impacted on academic performance, subjective well-being, and hopelessness. According to Positive Psychology, individual factors can play a protective role in stressful situations, promoting subjective psychological well-being. A cross-sectional study among 1,094 Italian university students was conducted to evaluate the mediation role of optimism and resilience in the association between COVID-19-related stress and subjective well-being, academic achievement and hopelessness. Was carry out a structural equation modeling with latent variables. Mediation analysis indicated that optimism and resilience can mediate the association between COVID-19-related stress and subjective well-being (optimism:  $\beta = -.23$ ,  $p = .00$ ; resilience:  $\beta = -.9$ ,  $p = .00$ ) and hopelessness (optimism:  $\beta = .07$ ,  $p = .003$ ; resilience:  $\beta = .09$ ,  $p = .00$ ). These findings broaden the body of knowledge about the association of COVID-19 related stress and subjective well-being, hopelessness and academic achievement, investigating the mediation role of optimism and resilience in the association between COVID-19-related stress and previous variables.

## THE COVID-19 INDUCED E-LEARNING EXPERIENCE WITHIN ITALIAN UNDERGRADUATES TRADITIONAL COURSES: THE RELATION OF GRIT TO ACADEMIC PERFORMANCE IN A MODERATED MEDIATION MODEL

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Governmental restriction due to COVID-19 pandemic led to Italian Universities moving teaching from face-to-face, to online. This represented an unexpected transition from traditional learning to what can be considered e-learning. This, together with the psychological distress that may be associated with the experience of lockdown, might have affected students' performance. It was hypothesised that grit may be a protective factor in such situations. Indeed, compared to their less gritty peers, individuals with higher levels of grit are expected to exhibit greater persistence in the pursuit of goals despite setbacks. A longitudinal study was conducted using an online survey in order to assess the moderated mediation effect of grit on students' achievement. 176 undergraduate students participated in the survey. The results showed that grit affects students' grades in final exams ( $t(173)=4.13$ ;  $p<0.001$ ); perceived self-efficacy in the management of complex problems had a mediation effect on grades ( $0.32$ ;  $b=0.30$ ; 95% C.I. [0.10,0.60]) while psychological distress moderated the first part of the mediation process ( $t(172)=-2.65$ ,  $p=0.01$ ). These novel findings extended our knowledge regarding the role of grit in academic performance.

## THE PSYCHOLOGY OF ART IN A LIFE-SPAN PERSPECTIVE

*Proponente: Cinzia Di Dio (Università Cattolica del Sacro Cuore)*

The study of psychological processes related to aesthetic experience spans topics like the aesthetic judgment of artistic artifacts of different contents, the redefinition of the very concept of artwork in light of the entry of artificial intelligence, the development of aesthetics mediated by sensorimotor experience, and how verbal communication can impact aesthetic judgment. Thus, the symposium will include contributions that embrace reflections on the psychology of aesthetics in the life-span. Di Dio et al. explore aesthetic judgments of artistic artifacts when produced by humans or robots, showing the weight of human authorship and creativity in aesthetic experience. Schieppati et al. study the perception of sacred and secular art images in terms of differences in aesthetic judgment and the attribution of vitality to the represented subjects. The contribution of Ardizzi et al. investigates whether sensorimotor experience can affect aesthetic judgment in preschool children. Finally, the research of Giannini et al. extends from the exploration of the effect of verbal description on aesthetic appreciation to the "Wonder Effect". The heterogeneity of the contents here presented ultimately converges into a comprehensive reflection on the meaning of aesthetic experience as a whole.



## SENSORIMOTOR INVOLVEMENT IN THE DEVELOPMENT OF AESTHETIC EXPERIENCE IN PRESCHOOL CHILDREN

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The aim of the study was to investigate whether sensorimotor interaction with sculpting materials (clay and sand) influences aesthetic judgment and perceptual evaluation of the same materials in preschool children. Thanks to the collaboration of Reggio Children SRL and the institution Scuole e Nidi d'Infanzia (RE) 59 children (mean age= 6 years SD +/- 0.3) were recruited. In a preliminary phase of the study, a measurement instrument appropriate to the age and cognitive skills of the children was validated. During the observation of both materials before and after sensorimotor interaction, each participant was asked three questions: 1) "How much do you like it?"; 2) "How soft is it?"; 3) "How dark is it?". In the interaction phase children were divided into 2 groups, each of which was asked to interact with one of the 2 materials for 3 minutes. The nature of the data collected is twofold: the relative scores of responses collected during the Pre- and Post-interaction assessment phase; 2D kinematic analysis of videotaped movements during the sensorimotor interaction phase. Results showed an interaction between children's explicit evaluation and their kinematic profiles supporting the idea that sensorimotor experience is involved in the development of aesthetic experience.

## ART MADE BY AI: THE EFFECT OF AUTHORSHIP ON ESTHETIC JUDGMENTS

*Cinzia Di Dio (Università Cattolica del Sacro Cuore), Gabriella Gilli (Università Cattolica del Sacro Cuore), Vittorio Gallese (Dipartimento di Medicina e Chirurgia, Università di Parma), Martina Ardizzi (Università di Parma), Sara Valentina Schieppati (Università Cattolica del Sacro Cuore)*

Artificial intelligence (AI), in various guises - embodied or virtual - emerges as titanic as ever also in the field of art. Studies on the impact of new AI art seek to understand whether these new art-forms are as compelling as those produced by humans. Also, the spread of art made by AI may teach us something about how humans perceive art. When, for example, a robot creates the work, how do people interpret it? We addressed this question by investigating, in 96 gender-balanced adult participants, how the objective and subjective aesthetic judgments of abstract art images may vary as a function of its creator: human vs. robot. Repeated measures factor data analysis showed a significant tendency to express a higher subjective judgment (i.e., like more) of art when informed that its producer is a human than when the authorship is unknown. Nevertheless, the judgments associated with AI art do not appear to be substantially affected, either positively or negatively, by knowledge of its author. This indicates a certain margin of acceptance of the new AI art with, however, a more emotional than objective preference for human art, whose goodness is influenced by a greater recognized creative capacity to humans than robots.

## THE BEAUTY OF HOLINESS: A RESEARCH ON THE AESTHETIC EVALUATION AND THE JUDGMENT OF VITALITY OF THE PICTORIAL REPRESENTATIONS OF SAINTS

*Gabriella Gilli (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Sara Valentina Schieppati (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

The psychology of art is a subject open to dialogue with other disciplines but there have been very few investigations on the relationship between this field of study and religious art. Starting from the theoretical hypothesis about a circular link between immanent divinity and the perception of vitality and a relationship between aesthetic and holiness, the research investigates the perception of sacred and of secular art images in terms of differences in aesthetic judgement as well as in the attribution of vitality to the depicted characters. Self-report questionnaires were administered: aesthetic judgement, vitality judgement, familiarity and recognition of saints and non-saints, Spirituality Assessment Scale and Utrecht-Management of Identity Commitments Scale in the Italian versions. According to preliminary data, religious paintings have a significantly higher aesthetic evaluation than profane images, while profane images obtain a significantly higher judgment of vitality than religious images. In addition, religious subjects gave higher scores for both vitality and aesthetics to religious images than to secular ones. Finally, no correlations were found between familiarity, religiosity and spirituality in the two main tasks (aesthetic and vitality judgments).

## PROMOTING AESTHETIC PLEASURE: FROM THE EFFECT OF VERBAL DESCRIPTION ON AESTHETIC APPRECIATION TO THE “WONDER EFFECT”

*Anna Maria Giannini (Dipartimento di Psicologia, Sapienza Università di Roma), Emanuela Mari (Dipartimento di Psicologia, Sapienza Università di Roma), Alessandro Quagliari (Dipartimento di Psicologia, Sapienza Università di Roma), Giulia Lausi (Dipartimento di Psicologia, Sapienza Università di Roma), Maddalena Boccia (Dipartimento di Psicologia, Sapienza Università di Roma), Alessandra Pizzo (Dipartimento di Psicologia, Sapienza Università di Roma), Benedetta Barchielli (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma), Jessica Burrai (Dipartimento di Psicologia, Sapienza Università di Roma), Laura Piccardi (Dipartimento di Psicologia, Sapienza Università di Roma)*

We investigated whether portrait descriptions affect the aesthetic pleasure of both ambiguous and unambiguous portraits. A sample of 86 participants were recruited and completed both a baseline and a retest session. In the retest session, we implemented a sample audio description for each portrait. The portraits were described by three types of treatment (global, local, and historical descriptions). During the retest session, aesthetic pleasure was higher than the baseline. Both the local and the historical treatments improved the aesthetic appreciation of ambiguous portraits; instead, the global and the historical treatment improved aesthetic appreciation of Renaissance portraits during the retest session. Additionally, we found that the response times were slower in the retest session. These findings suggest that aesthetic preference was affected by the description of an artwork, likely due to a better knowledge of the painting, which prompts a more accurate (and slower) reading of the artwork. Ambiguous portraits could also be used to study the so-called “wonder effect”. Thanks to the ambiguity of some paintings that lend themselves to perceptual games, upside-down images take on meanings that are different from the picture the viewer initially perceives.

## **BULLYING AND VICTIMIZATION INVOLVING ETHNICITY: PROTECTIVE AND RISK FACTORS AND CONSEQUENCES**

*Proponenti: Marina Camodeca (Università degli Studi di Udine), Benedetta Emanuela Palladino (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

This symposium aims to shed light on factors which may explain bullying and victimization in multicultural schools. The symposium includes four contributions, three of which with longitudinal designs, involving students at different ages: children (primary school), early-adolescents (middle school), and adolescents (high school). Two contributions focus on ethnic bullying, i.e., harassment motivated by ethnic characteristics of the victims. Findings show that ethnic bullying results as a combination of individual factors in terms of prejudice, low sociocultural empathy, and low tolerance, and that also contextual factors matter, such as prestige norms of moral disengagement. The other two contributions investigate victimization experienced by Italian students and students with an immigrant background. Social anxiety results in higher risk of being victimized one year later for immigrant adolescents than for immigrant children and Italian students, but Italian and immigrant peers are similarly impacted by the COVID-19 pandemic: While victimization decreases, emotional symptoms increase, over time. Results are discussed in terms of individual and contextual factors, and group and intergroup relationships, within each developmental period.

## THE ROLE OF SOCIAL ANXIETY IN PREDICTING VICTIMIZATION IN ITALIAN AND IMMIGRANT CHILDREN

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Previous works have found social anxiety to be associated with peer victimization. However, it is unclear whether such a relation works similarly for children and preadolescents, and for native and non-native pupils. The current longitudinal study (one-year interval) examined whether the association between this internalizing problem and victimization was moderated by students' immigrant status (Italian vs. immigrant) and by developmental span. Participants were 445 children (mean age at T1 = 9.55 years; SD = 0.55) and 210 early adolescents (mean age at T1 = 12.51; SD = 0.57), who filled questionnaires about social anxiety and peer victimization. Results showed that social anxiety predicted victimization for immigrant students ( $b = -.12$ ;  $p < .05$ ). In addition, immigrant status and developmental span interacted and jointly moderated the association between social-anxiety and victimization ( $b = .31$ ;  $p < .01$ ), indicating that socially anxious immigrant early adolescents were more vulnerable to peer victimization than children and their Italian peers. Findings are discussed in terms of group and intergroup processes and developmental tasks, as relevant factors for addressing social anxiety and promoting inclusive school environments.

## PRESTIGE NORMS OF MORAL DISENGAGEMENT, TOLERANCE AND ETHNIC BULLYING

*Noemi Papotti (Università Cattolica del Sacro Cuore), Simona Carla Silvia Caravita (Università di Stavanger, Norway)*

Ethnic discriminatory bullying (EB) is associated with prejudicial attitudes and low tolerance (Caravita et al., 2019). Allport (1954) pointed out that attitudes can be influenced by the environment. This study aims to investigate with a multilevel analysis whether an intolerant attitude is associated with the role of ethnic bully and whether this association modifies as the prestige norms of moral disengagement (Dijkstra & Gest, 2014). The sample consists of 1098 preadolescents ( $M=11.7$ ;  $DS=.77$ ; males=51%; migratory background = 34.5%) of Northern Italy. Peer nomination were used for ethnic bully and the most popular within the class. Demographics, moral disengagement (Caravita et al., 2016) and tolerance and prejudice scale (Van Zalk et al. 2013) are self-report measures. EB is associated with being male (.02\*\*\*), being older (.02\*\*), having less tolerance towards people with different ethnicity (-.01\*\*). This relationship varies according to the prestige norms of moral disengagement (-.03\*) in the classroom for Italian students (-.50\*\*\*; AIC=-2671.2; BIC=-2611.6). This study shows that EB is associated with a concomitance of both individual and contextual factors, particularly the prestige norms of moral disengagement have a role in the relationship between tolerance and EB.

## PREJUDICE, ETHNOCULTURAL EMPATHY, AND ETHNIC BULLYING IN ADOLESCENCE: A 3-WAVES LONGITUDINAL STUDY

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Understanding bullying against peers with an immigrant background (Elamè, 2013) implies to deepen whether specific individual factors are involved in the behaviour. Although research has shown the relative effect of possible risk (i.e., prejudice) and protective (i.e., ethnocultural empathy) factors in affecting youth's engagement in ethnic bullying, to date, no study has examined their reciprocal longitudinal association. The present study included 450 boys (Mage =15.26; SD=.65) and 393 girls (Mage =15.20; SD=.65) from a three-wave data collection. Results from a Cross-Lagged Panel Model (CLPM) showed that for both, boys and girls, prejudice had a negative effect on ethnocultural empathy and the latter, had a negative effect on ethnic bullying. A negative and significant effect of ethnic bullying to ethnocultural empathy was found only for females. Besides, no direct effect from prejudice to ethnic bullying was found, but indirect effect results showed that prejudice have an impact on ethnic bullying through the mediation of ethnocultural empathy. In sum, adolescents with higher levels of prejudice are at greater risk for the engagement in ethnic bullying behaviors, if they hold lower levels of ethnocultural empathy. Results are discussed in terms of practical implications.



## THE IMPACT OF THE COVID-19 PANDEMIC ON VICTIMIZATION AND EMOTIONAL SYMPTOMS: A LONGITUDINAL STUDY INVOLVING ITALIAN AND IMMIGRANT STUDENTS

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Bullying victimization is one of the main risks that students may face at school (Smith, 2016). The outbreak of the COVID-19 pandemic and the measures adopted to contain the virus' spread, impacted adolescents' social interactions and mental health (Nocentini et al., 2021). Specifically, literature evidenced that adolescents already at risk before the pandemic, experienced worst effects of it (Branje & Morris, 2021). Using Latent Growth Curve Analysis (LGCA), the aim of this study is to analyze trends over time in victimization-V (FBVS; Palladino et al., 2016) and emotional symptoms-ES (SDQ; Goodman, 1997) looking for differences and similarities in Italian students and students with an immigrant background. 852 students (46.1% females; Mage=15.22; SD=.63; 18.1% with an immigrant background) attending the first year on high school, were followed from pre- pandemic period (T1-January 2020) to 12-months (T2-February 2021) and 15-months (T3-May 2021) after the outbreak. Results showed a decrease over time in Victimization and a significant increase in ES over the time in both groups. However, only in the Italian group, there were a significant correlation between the intercept of V and the slope of ES ( $\beta=-.344$ ;  $p=.036$ ). Results are discussed in terms of practical implications.

## MOVING BEYOND BARRIERS: STRENGTHEN THE SKILLS NEEDED TO MASTER CAREER CHOICES

*Proponenti: Anna Parola (Università degli Studi di Napoli Federico II), Raffaele Di Fuccio (Università degli Studi di Foggia)*

Proponents: Anna Parola and Raffaele Di Fuccio During schooling, adolescents must be equipped with the skills, resources and attitudes needed to successfully cope with the challenges of the current labor market. The possible interventions to support career development have been investigated focusing on different issues by the authors of the four contributions. The contribution of Fusco focuses on the critical aspects of the decision-making process, social pressure, anxiety and lack of interest towards the future. Fantinelli and colleagues explore intervenient variables impacting the relation between adolescent-parents career congruence and adolescents' well-being and future intention Parola and colleagues present a framework that focuses on the development of game scenarios based on digital storytelling for adolescents aimed at the support of a positive vision about their future. Finally, Nappo and colleagues shed light on the job placement for individuals with autism spectrum disorder deepening the effectiveness of serious games to augment career skills. The Symposium calls attention to making career choices as developmental tasks and possible interventions with and without technology to enhance career confidence.

## CHOOSING A CAREER AS AN ITALIAN GEN Z MEMBER. PHENOMENOLOGY OF POST-HIGH SCHOOL CAREER CHOICES

*Luca Fusco (Università degli Studi di Napoli Federico II)*

Post-secondary education career choices are key moments for career and overall identity development of young people. While in the last decades career skills have been focused as key topics in career studies, the experience of undertaking a first adult career commitment at the end of high school is still considerable as a normative event for most Italian students. In the present qualitative study, a small group of Italian young adults were interviewed and invited to recall their post-high school career choices and describe their feelings and thoughts related to the decision-making process. A phenomenological approach, aiming to describe the essential aspects of career choices as human experience, was used to analyze the data collected. The study underlined critical aspects of the decision making process, social pressure, anxiety and lack of interest towards the future, that have to be considered when developing career interventions in educational environments and must be seriously envisioned by career practitioners and professionals who work with high school students.

## INDIVIDUAL AND CONTEXTUAL DIMENSIONS IN THE VOCATIONAL CHOICES: WHAT IMPACT ON WELL-BEING?

*Stefania Fantinelli (Università degli Studi di Foggia),* *Ciro Esposito (Università degli Studi di Foggia),* *Francesco Sulla (Università degli Studi di Foggia),* *Leonardo Carlucci (Università degli Studi di Foggia)*

Adolescents who have to take decisions for their future career or academic path, can be affected by parental expectations and other individual and contextual factors. Aim of this study is to explore intervenient variables impacting the relation between adolescent-parents career congruence and adolescents' well-being and future intention. In particular, it has been implemented a systemic approach: academic motivation and work hope represent the personal side; mattering and the perceived congruence with parents are contextual dimensions. A sample of 142 high school students who are managing their decisions for the future, fill in an online survey. Data showed that congruence with parents wishes has a significant effect on academic motivation, work hope and mattering, which in turn have a positive and significant effect on both future intention to undertake university studies and on the participants' well-being. Strengths of the study are two-fold: it is the first implementation of the adolescent-parent career congruence scale with distinct items for mother and father; moreover, there are practical implications concerning vocational guidance interventions: nurturing those dimensions that can foster well-being and contribute to an aware career or academic choice could become a duty.

## SUPPORTING TEACHERS TO SUPPORT STUDENTS' CAREER CHOICES: THE NEFELE'S SNOWBALL EFFECT

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In the last years, support for students' career development is becoming an important focus of attention in educational systems. Due to the challenges of labor market, teachers have the critical function of scaffolding student career transitions. The literature showed that teachers play a major role in influencing students' career choices (for a review, Wong et al., 2021). In many EU countries, e.g. Italy, teachers are not trained to support students in the career development process yet. The NEFELE ERASMUS+ project aims at modelling innovative methodologies for pre-service teachers of middle schools that can be useful to support adolescents' career development and a positive vision about their future. Specifically, NEFELE provides curricular frameworks, based on career and positive psychology, and tools (MOOC and digital game) to orient teachers' career supportive behaviors. The aim of NEFELE is to train teachers so that they will scaffold their students, providing them with a space to experiment with themselves in different roles, opening to a positive future vision and enhancing future orientation skills. Examples of curricular frameworks to be implemented in the educational systems and game scenarios for adolescents as the first results of NEFELE projects will be presented.

## SERIOUS GAMES FOR THE JOB TRAINING OF PEOPLE WITH AUTISM SPECTRUM DISORDER: AN EXPLORATORY REVIEW

*Raffaele Nappo (Centro di Riabilitazione Neapolisanit), Mariangela Cerasuolo (A.I.A.S. Sez. Nola Onlus), Roberta Simeoli (Centro di riabilitazione Neapolisanit), Jessica Napolitano (Università degli Studi della Campania 'Luigi Vanvitelli'), Angelo Rega (Centro di riabilitazione Neapolisanit)*

People with Autism Spectrum Disorder (ASD) are more bound to exhibit difficulties in some cognitive processes, social communication and behavior. These difficulties are related to serious problems in the adaptive functioning domain which in turn hamper the job placement. Technological solutions are frequently used to enhance learning of specific training in ASD, chiefly among them serious games (SGs). SGs use strategies that are often applied in special education such as repetition, immediate feedback, and context-based teaching and learning in a safer environment. The main goal of our study is to investigate whether SGs might be considered as useful tools for the intervention of the life skills in ASD and the extent to which they promote the job placement in this population through an exploratory review. Our findings suggest that serious games can represent a prominent tool to enhance life skills and for training simple job skills in people with ASD.

## UNDERSTANDING LANGUAGE DEVELOPMENT BY DESCRIBING EARLY PREDICTORS, PROFILES AND INTERVENTIONS

*Proponenti: Maja Roch (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Annalisa Guarini (Università di Bologna)*

Language development is the result of a complex pattern of reciprocal and dynamic interactions between genetic components and environmental influences. Individual differences are determined by several internal (cognitive, motor) and external (context of development) factors. This symposium aims to highlight recent advances in Italian research on typical and atypical language development and early intervention. Perucchini et al. investigated in a longitudinal study, the moderating role of early pointing on the developmental trajectories of vocabulary over the second year of life in early and late pointers. Zuccarini et al. identified profiles of low-risk and full-term late talkers (slightly, moderately and severely late), analysing their linguistic and cognitive abilities at 30 months. Guerra et al. described linguistic trajectories of preterm children according to the role of maternal language input in the first year of life. Leo et al. presented an intervention for children aged 3-6 years aimed at fostering the acquisition of new words through reading books animated by gestures. Together, these contributions will bring new insight into recent empirical contributions regarding early predictors, trajectories and interventions of typical and atypical language development.

## MODERATING EFFECTS OF EARLY POINTING ON DEVELOPMENTAL TRAJECTORIES OF WORD COMPREHENSION AND PRODUCTION

*Arianna Bello (Università degli Studi Roma Tre), Paola Perucchini (Università degli Studi Roma Tre), Fabio Presaghi (Sapienza Università di Roma), Tiziana Aureli (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The study investigated the moderating role of early communicative pointing on the developmental trends of word comprehension and production over the second year. Seventy-seven infants were involved in an experimental pointing task in sessions at 9 and 12 months, and the MB-CDI questionnaire was filled in by their parents at 15, 18 and 24 months. Based on the age at which the infants were seen to use pointing, they were classified into three groups: the 'Early' pointers, who first pointed during the 9-month session; the 'Typical' pointers, who first pointed in the 12-month session; and the 'Late' pointers, who never pointed in either of the sessions. Using multilevel modelling, we traced the developmental trajectories and individual differences for the two lexical domains of word comprehension and production according to the three pointing groups. The main results showed that compared to the Typical pointers: the Early pointers were faster for word comprehension development, and were similar for word production; the Late pointers showed lexical delay before 18 months for word comprehension, and between 18 and 24 months for word production. These data are discussed in light of the different roles of early pointing on receptive compared to expressive vocabulary development.



## LANGUAGE PROFILES IN LOW-RISK PRETERM AND FULL-TERM LATE TALKERS

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Late talkers represent a heterogeneous population. We aimed to identify language profiles of low-risk preterm and full-term late talkers according to their receptive and expressive vocabulary and considering linguistic and cognitive skills and biological and environmental risk factors. Sixty-eight late talkers (33 low-risk preterm and 35 full-term) were identified through a language screening at 30 months. Parents filled out the Italian short forms of the MB-CDI. Children were assessed with the PING and BSID-III tests. A cluster analysis identified three distinct profiles: severely late, with limited receptive vocabulary, limited/absent lexical and sentence production, and phonological accuracy, and lower cognitive scores; moderately late, with average receptive vocabulary and limited lexical and sentence production and phonological accuracy; slightly late, with average receptive vocabulary and partially limited lexical and sentence production and phonological accuracy. Male gender and not attending a child care center resulted as risk factors. Findings highlighted the relevance of assessing receptive and expressive linguistic and cognitive skills and considering biological and environmental risk factors to trace late talkers' profiles and implement tailored interventions.

## THE ROLE OF PREMATURITY AND MATERNAL INPUT IN LANGUAGE DEVELOPMENT

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It is described in the literature that preterm birth may have an unfavorable effect on numerous aspects of development. Specifically, many studies reported atypical language development in preterm born children from infancy to adolescence. This study aims to explore linguistic trajectories of preterm children. The sample consisted of 60 dyads, 50 preterm (PT) and 50 fullterm (FT). We evaluated interactive behaviors (vocal and verbal productions and non-verbal behaviors) and mother's infant directed speech (IDS; verbosity, lexical variability, and syntactical complexity) at 3, 9 and 12-months during mother-child interactions, and we considered mothers' report of children's productive vocabulary at 24 months. Results indicated that at 3 and 9 months PT produced less vocal and verbal productions than NT. At 12 and 24 months this difference not emerged. Regarding IDS, results showed that at 3, 9 and 12 months PT mothers used more redundant and less complex lexicon than NT mothers, probably as an attempt to modulate the linguistic input in relation to the child's skills. The study highlights the importance of considering the interaction of several factors in the study of developmental trajectories of the PT child.

## DOES THE GESTURES IN MOVEMENT SUPPORT THE ACQUISITION OF NEW WORDS FROM STORIES IN CHILDREN BETWEEN 3 AND 6 YEARS?

*Irene Leo (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Raffaele Dicataldo (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Maja Roch (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Stories are the ideal context for the acquisition of new words. The aim of the present work is to examine, through a series of readings that were accompanied by gestures and movements, whether the acquisition of new words is facilitated when the linguistic context of the story is enriched by complex moving gestures. 186 children aged 3-6 years took part in the study. They were administered a test of lexical (TFL) and motor skills (PDMS) and a test of knowledge of 36 target words and 36 complex gestures. They then participated in the interactive reading of 6 stories, each containing 6 target words: 2 words accompanied by movement gestures not associated with the meaning, 2 accompanied by gestures associated with the meaning and 2 without gestures. Finally, their ability to recognise the 36 target words and perform the respective gestures was assessed. The results indicate, for all age groups, a facilitation in the acquisition of new words when they are accompanied by a semantically related moving gesture. In this case the performance and coordination of the gesture is also better. The amount of words and gestures acquired is greater for children who have a lower vocabulary and poorer motor skills in the initial assessment.

# DIGITAL TEXT COMPREHENSION AND METACOGNITION: FROM PRIMARY SCHOOL TO UNIVERSITY STUDENTS

*Proponenti: Elena Florit (Dipartimento di Scienze Umane, Università di Verona), Daniela Raccanello (Dipartimento di Scienze Umane, Università di Verona)*

In the 21st century, students are increasingly exposed to digital texts at all educational levels. The digital medium poses new challenges to the skills through which the reader constructs meaning. It is pivotal to increase scientific knowledge about medium effects and relations between digital text comprehension and readers' individual differences. Through a set of coherent papers, this symposium investigates primary school to university students' comprehension of digital texts presented on various devices in relation to metacognitive skills. Texts were single or multiple; informational and/or narrative; and on different topics. Metacognition was operationalized considering both knowledge and more active processes. Involving primary and secondary school students, papers 1 and 2 explore how comprehension monitoring and calibration account for comprehension of texts on paper, tablet, and computer; paper 3 focuses on the links between metacognitive knowledge and multimedia text comprehension within a training on emotions. Considering university students, paper 4 examines how advanced theory of mind is related to multiple text comprehension. All studies have both theoretical and practical significance for the educational implications that can be drawn from the results.

## READING COMPREHENSION ON PAPER, COMPUTER, AND TABLET IN FIRST GRADERS: THE ROLE OF COMPREHENSION MONITORING

*Elena Florit (Dipartimento di Scienze Umane, Università di Verona), Pietro De Carli (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Laura Favrin (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Kate Cain (Department of Psychology, Lancaster University, UK)*

Recent meta-analyses indicated the inferiority of reading from screen compared to paper, mainly among undergraduates. Screen inferiority was linked to differences in metacognition. This study focuses on beginner readers to investigate whether the inferiority of reading from screen emerges early and is related to comprehension monitoring skills. Participants were 58 first graders (Mage=6.8 years). Text comprehension at the level of the main idea, literal and inferential information was assessed using six texts (one narrative and one descriptive text on paper, laptop, and tablet). Measures of comprehension monitoring, reading preferences, and reading skills (standardized tests) were also collected. Results from mixed models showed the superiority of main idea comprehension for descriptive texts presented on tablets and narrative text comprehension for literal and inferential information. Comprehension monitoring uniquely accounted for main idea and literal comprehension and had a greater effect on descriptive than narrative text comprehension at the inferential level. These findings inform educational practices by showing that the screen inferiority effect is not detected in beginner readers' text comprehension. The latter is supported by metacognition, independently of the medium.

## METACOGNITIVE KNOWLEDGE AND CLASS LEVEL DIFFERENCES IN A MULTIMEDIA READING TASK: THE PANDHEMOT APP

*Giada Vicentini (Dipartimento di Scienze Umane, Università di Verona), Daniela Raccanello (Dipartimento di Scienze Umane, Università di Verona), Emmanuela Rocca (Dipartimento di Scienze Umane, Università di Verona), Roberto Burro (Dipartimento di Scienze Umane, Università di Verona)*

Metacognitive knowledge (MK) includes self-knowledge, i.e., the awareness of one's strengths/weaknesses pertaining to a learning activity. MK is crucial as it influences both students' learning and strategies. In traditional reading tasks, MK usually increases with age; less is known concerning MK related to digital reading. We investigated whether learning through a multimedia reading task (MRT) affects MK, focusing on class level differences. A sample of 152 3rd ( $M = 8.35$ ,  $SD = 0.28$ ) and 7th graders ( $M = 12.40$ ,  $SD = 0.30$ ), divided in experimental/control groups, participated to a training using tablets. Through a MRT—the app PandHEMOT (Pandemics-Helmet for EMOTions)—we promoted their knowledge on pandemics and emotions. In pre and post-task phases we assessed MK measuring how many things students declared to know about the training contents. Running LMMs, we found an increase in MK after the MRT only in the experimental group. Moreover, both scores in the nine levels of the MRT and MK were higher for 7th vs. 3rd graders. However, MK was not related to MRT scores. Our findings indicate that participating to a psychoeducational training using digital reading is associated also to changes in students' metacognition, as a relevant step for generalizing learning to other contexts.

## EFFECTS OF READING MEDIUM ON TEXT COMPREHENSION IN EIGHT GRADERS: THE MEDIATING ROLE OF CALIBRATION BIAS

*Angelica Ronconi (Università degli Studi di Padova), Valentina Veronesi (Università degli Studi di Milano-Bicocca), Lucia Mason (Università degli Studi di Padova), Lucia Manziona (Università degli Studi di Padova), Øistein Anmarkrud (University of Oslo, Norway), Ivar Bråten (University of Oslo, Norway)*

Meta-analyses show that reading comprehension is greater on paper than screen for informational texts. However, most studies involved college students. Our within-subjects study examined the effects of reading medium (paper/screen) on comprehension and metacomprehension as calibration of performance in 150 8thgraders. The mediating role of calibration on comprehension was examined. Comprehension (printed/digital) was evaluated as abstract main idea, key points, and other relevant information. Calibration of performance (bias) was assessed by subtracting students' actual performance from their self-evaluation of performance. Mixed models revealed that participants comprehended less the text main idea ( $B=-0.11, 95\%CI[-0.21--0.01], p=.039$ ) and overestimated more their performance ( $B=0.43, 95\%CI[0.16-0.70], p=.002$ ) when reading digitally. Mediation analyses showed an indirect effect of reading medium on main idea and key points comprehension via calibration bias, yielding an estimate of 0.05 ( $95\%CI[0.0027-0.1085]$ ) and 0.08( $95\%CI[0.0050-0.1599]$ ), respectively. Results extend current knowledge of the effect of reading medium. Comprehension and metacomprehension of adolescents are negatively affected by digital medium, with calibration bias mediating the effect of medium on comprehension.

## THE ASSOCIATION BETWEEN THEORY OF MIND AND DIGITAL READING IN UNIVERSITY STUDENTS

*Christian Tarchi (Dipartimento di Scienze della Formazione e Psicologia, Università degli Studi di Firenze),  
Lidia Casado-Ledesma (Università degli Studi di Firenze)*

The 21st century is characterized by increased access to information and intertextual integration is now considered an essential skill in democratic societies. To contribute to the literature on this topic, this study investigated the relationship between university students' ability to comprehend digital texts and their theory of mind (ToM). The participants were 84 university students. Performance in multiple-text comprehension was assessed by asking participants to read six conflicting digital texts on the topic of vaccination and write an argumentative essay. The essay was coded for quality of argumentation. We assessed ToM skills using the Strange Stories task. We also assessed ToM use by analysing participants' mental state talk while reading using a think-aloud protocol (MST\_R) and while writing using the essay content (MST\_W). ToM ability and MST\_W were associated with essay argumentative quality. Students' ToM level was significantly associated with essay argumentative quality, via MST\_R. The relationship between MST\_R and argumentative quality was mediated by MST\_W. The results suggest that ToM as a metacognitive competence can support readers in seeing texts as representations of a topic that can have many different interpretations.



## DRAWING AS A RESEARCH TOOL IN DEVELOPMENTAL AND EDUCATIONAL PSYCHOLOGY

*Proponenti: Sara Berti (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma), Ada Cigala (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma)*

Drawing has often been used to explore the perceptions and experiences of children and adolescents, and its strengths and limitations as a research tool have been discussed in literature (Clark, 2005; Quane et al., 2021). The present symposium aims to explore how such tool have been used in different studies on developmental age and what methods researchers have adopted in their investigations, to better understand the role that drawings can play in psychological research. The different contributions investigate different areas of developmental and educational psychology, including samples ranging from preschool age to adolescence. Berti and colleagues explored preschoolers' representation of the physical environment of their early childhood education and care centers. Cannoni and colleagues investigated how primary school children with emotional and behavioral difficulties represent human figures and friendship. Fabris and colleagues explored the representation of bullying in a sample of primary school children. Incognito and Pinto investigated the quality of the sibling relationship in children and adolescents aged 5 to 17 with typical and atypical development. Finally, Ionio and colleagues evaluated the effects of oncological disease on the body's self-image in adolescence.

## DRAWING AS A TOOL TO EXPLORE CHILDREN'S REPRESENTATION OF ECEC SPACES

*Sara Berti (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma), Ada Cigala (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma), Valentina Grazia (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma)*

The importance of the physical environment in Early Childhood Education and Care (ECEC) has been widely recognized in developmental and educational psychology. In accordance with a constructivist approach, which indicates that space is co-constructed through the meanings given by those who inhabit it, the present study aimed to explore the meanings given by children as main actors and users of ECEC spaces. 190 children aged 3 to 6 were asked to draw their favorite space in the preschool and were then interviewed about their drawing. Coding was conducted using a systematic coding system (DRAW.IN.G.) which included categories referring to physical, behavioral, relational, emotional and motivational aspects. Frequency analyses indicated children's preference for outdoor (50.0%) and for playing both with others (32.1%) or alone (26.8%). A Multiple Correspondence Analysis extracted two dimensions accounting for 49% and 38% of the inertia: one discriminated between less specific outdoor activities and more specific indoor activities, the other was related to the transition between structured moments lived with others and free moments lived individually. The findings provide new points for reflection on how children experience their ECEC spaces, helping us to get closer to their vision.

## DRAWING'S CHARACTERISTICS IN CHILDREN WITH EMOTIONAL AND BEHAVIORAL DIFFICULTIES

*Eleonora Cannoni (Sapienza Università di Roma), Madalina Grigore (Sapienza Università di Roma),  
Martina Cammardella (Sapienza Università di Roma)*

Usefulness of children's drawing in cognitive assessment is widely recognized in literature, while the use to assess emotional and relational characteristics is controversial. The present study aimed to investigate how children with emotional and behavioral difficulties represent human figures and friendship through drawings. Participants were 137 primary school children (age  $M=8.6$ ;  $SD=1.12$ ) who were asked to draw him/herself with a friend in two circumstances: when "things go well" and when "things are not going well" and three human figures (a man, a woman and him/herself). Pictorial Assessment of Interpersonal Relationships (PAIR, Bombi et al., 2007) was used to code friendship drawings and Draw A Person: Screening Procedure For Emotional Disturbance (DAP:SPED, Naglieri et al., 1991) was used to code human figures. Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997) was administered to parents to assess children's emotional and behavioral problems. ANOVA showed that children with attention and hyperactivity difficulties represented less Cohesion in friendships' drawings ( $p=.01$ ) and more emotional indices in the drawing of human figures ( $p=.009$ ). The study confirms the usefulness of the pictorial tool in the assessment of emotional and relational development.

## DETECTING BULLYING INVOLVEMENT IN ITALIAN PRIMARY SCHOOL CHILDREN: A COMPARISON BETWEEN CHILDREN'S DRAWINGS AND INTERVIEW AND THEIR RELATIONSHIPS WITH SELF-REPORT MEASURE

*Matteo Angelo Fabris (Dipartimento di Filosofia e Scienze dell'Educazione, Università degli Studi di Torino), Michele Settanni (Dipartimento di Psicologia, Università degli Studi di Torino), Francesca Giovanna Maria Gastaldi (Dipartimento di Psicologia, Università degli Studi di Torino), Davide Marengo (Dipartimento di Psicologia, Università degli Studi di Torino), Claudio Longobardi (Dipartimento di Psicologia, Università degli Studi di Torino)*

Our study tries to explore the representation of bullying in a sample of Italian primary school children by using interview and children's drawings. We also aim to investigate whether students' involvement in different bullying roles, as measured by self-assessment, correlates with different characteristics of bullying portrayal identified through children's drawings and interviews. Participants are 640 elementary school students (mean age = 9.44; SD = 0.67; 53.3% male). The protocol included a drawing about experiences of bullying, a semi structured interview, and a questionnaire about their experiences in different bullying roles. Forms of bullying were more likely to be identified in the interview data than in the drawing data. The presence of a power imbalance between the bully and the victim was most frequently recognized in both the interview data and the drawing data. The interview data showed that sadness was the most frequently coded emotion among those expressed by victims, followed by fear, anger, shame, and guilt. Sadness showed the highest prevalence in the drawing data, followed by emotionlessness, fear, anger, and guilt. The interview appears to be better at identifying different forms of bullying and tends to be more informative.

## CONFLICT AND HARMONY IN SIBLINGHOOD: DRAWING'S CONTRIBUTION TO RESEARCH ON INTERPERSONAL RELATIONSHIPS

*Oriana Incognito (Università degli Studi di Firenze), Giuliana Pinto (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

While the importance of siblinghood across the lifespan is widely recognized, less explored are the characteristics of that relationship when in the fraternal dyad one of the partners has an atypical developmental pattern. The present study aimed to investigate the quality of the sibling relationship through the concurrent use of a verbal instrument, the Sibling Relationship Inventory (Lecce et al. 2005; Stocker e McHale, 1992), and a graphical instrument, Pictorial Assessment of Interpersonal Relationships (PAIR, Bombi et al. 2007). 20 siblings aged 5 to 17 with typical and atypical development completed the SRI and were asked to draw themselves with their siblings in a condition of harmony and conflict. The relational dimensions measured are Affection and Rivalry, the degree of Similarity, Balance of values, Cohesion and Emotional tuning perceived by the partners. Statistical analyses show similarities and peculiarities between the representations of siblinghood of dyads in which one of the partners presents developmental atypicalities and dyads in which such atypicalities are absent. The respective contributions of the verbal tool and the pictorial tool for accessing representations of peer relationships throughout development are discussed.

## BODY SELF-IMAGE AND ONCOLOGICAL DISEASE IN ADOLESCENCE

*Chiara Ionio (Università Cattolica del Sacro Cuore), Francesca Bigoni (Fondazione Soletterre), Maddalena Sacchi (Università Cattolica del Sacro Cuore), Marco Zecca (Fondazione Policlinico San Matteo IRCCS), Elena Bergami (Fondazione Policlinico San Matteo IRCCS), Marta Landoni (Università Cattolica del Sacro Cuore), Giulia Ciuffo (Università Cattolica del Sacro Cuore), Anna Rovati (Fondazione Soletterre), Damiano Rizzi (Fondazione Soletterre)*

As shown in the literature, the body image of adolescents with cancer is greatly affected by the treatments undergo. Our aim is to assess the effects of oncologic disease on body self-image in adolescence. A total of 78 adolescents were recruited (31 with oncological disease and 47 as a control group; 43.6% male and 56.4% female). The oncology sample was recruited at IRCCS Policlinico San Matteo, Pavia from 2019 to 2021. After ethics, the adolescents fulfilled: Mi Disegno and Trauma Symptom Checklist for Children (TSCC). In the oncology sample, there was a significant positive correlation between adolescents' anxiety (TSCC) and sexual characterization of graphic representation ( $r=.528$ ;  $p<0.05$ ). Furthermore, the univariate ANOVA showed a significant influence of adolescent dissociation on sexual graphic characterisation ( $p=0.011$ ). Finally, the univariate ANOVA, conducted for the oncology sample, showed a significant influence of adolescent depression on the quality and detail of graphic representation ( $p=0.019$ ). Despite the limitations (e.g. study in a single hospital), these results suggest the importance of paying attention to both psychological and physical well-being in these patients who are in such a delicate phase of identity construction.

## PROMOTING WELL-BEING AND PREVENTING PROBLEMS AT SCHOOL FROM A SOCIAL AND EMOTIONAL LEARNING PERSPECTIVE

*Proponenti: Giovanni Maria Vecchio (Università degli Studi Roma Tre), Valeria Cavioni (Università degli Studi di Milano-Bicocca)*

A large body of studies has shown that preventive interventions at school according to the Social and Emotional Learning approach have long-term positive impacts on students and teachers (Mahoney et al., 2021). The symposium offers an overview of some research experiences on the promotion of well-being at school in different cultural contexts. Cavioni and colleagues present the results of the PROMEHS, a comprehensive program that promotes mental health at school in six European countries, on social and emotional competence, resilience, and self-efficacy of teachers. Vecchio and colleagues describe the effects of a prosocial education intervention (CEPIDEAS Junior) in four Colombian primary schools, on pupils' prosocial, aggressive, and emotional instability behaviors and on their school involvement. Di Norcia and colleagues present a study on the role of teachers' emotional intelligence in differentiating the relation with pupils (conflict, dependence, and closeness), considering their emotional and behavioral difficulties. Finally, D'Amico and Geraci describe the effects of the MetaEmozioni Scuola Program (MES), implemented in five Italian cities, on pre-adolescent pupils' emotional and meta-emotional intelligence (MEI), and on their sociometric status.

## TEACHERS' MENTAL HEALTH MATTERS: RESULTS FROM A SUCCESSFUL EXPERIMENTATION

*Valeria Cavioni (Università degli Studi di Milano-Bicocca), Ilaria Grazzani (Università degli Studi di Milano-Bicocca), Elisabetta Conte (Università degli Studi di Milano-Bicocca), Veronica Ormaghi (Università degli Studi di Milano-Bicocca), Alessia Agliati (Università degli Studi di Milano-Bicocca), Sabina Gandellini (Università degli Studi di Milano-Bicocca)*

The spreading out of the COVID-19 pandemic caused several consequences on teachers' mental health, including increased stress, anxiety, and lack of motivation. In the last three decades, there has been a proliferation of programs targeted to promote students' mental health. Missing, however, is a comprehensive program that is designed also for the psychological teachers' needs. In this regard, this contribution aims at presenting the results of PROMEHS, a comprehensive program targeted to promote school mental health, related to the teachers' outcomes. PROMEHS was implemented for 6 months in 6 European Countries involving about 10000 students and 1000 teachers, using the training study methodology. The results showed that teachers who received the PROMEHS program (experimental group) - which includes a training course, supervision, and a number of activity handbooks and guidelines - outperformed teachers who did not (control group) on measures of social and emotional competence, resilience, and self-efficacy. Implications of the outcomes will be discussed underlying the recent European policy and interventions, including another key European program, namely "Teaching to Be", an innovative online course targeted to enhance teachers' wellbeing.



## PROSOCIAL EDUCATION IN PRIMARY SCHOOL: PRELIMINARY RESULTS OF THE CEPIDEAS JUNIOR PROGRAM IN COLOMBIA

*Giovanni Maria Vecchio (Università degli Studi Roma Tre), Liliana Uribe Tirado (Universidad de San Buenaventura, Colombia), Marcela S. Ruiz Garcia (Universidad de San Buenaventura, Colombia), Stefania Sette (Sapienza Università di Roma), Federica Zava (Università degli Studi Roma Tre)*

School prevention programs from the perspective of SEL (CASEL, 2013) favor the promotion of socio-emotional skills and responsible behaviors. This is of great importance, especially in Colombia, where a difficult peace process is underway. Prosocial education is a way to promote positive interpersonal relationships (Brown et al., 2012). In this vein, the CEPIDEAS Junior program was adapted for the Colombian context to promote prosocial behaviors in primary school. This study evaluated the effects of the program on prosocial, aggressive, and emotional instability behaviors, and children's school involvement. Participants were 334 children ( $M = 8.25$  years,  $SD = .78$ , 40.7% girls; control group = 50.1%). Teacher reported prosocial, aggressive, emotional instability behaviors (Caprara et al., 1993), and self-reported school involvement were measured. Results of ANOVA's repeated measures showed that prosocial behaviors increased in the intervention group and decreased in the control group. Aggressive behaviors and emotional instability decreased in the intervention group while increased in the control group. Moreover, children's school involvement remained stable in the intervention group while decreased in the control group. Implications for school intervention were discussed.

## STUDENTS' EMOTIONAL AND BEHAVIORAL DIFFICULTIES IN PRIMARY SCHOOL: THE ROLE OF TEACHERS' EMOTIONAL INTELLIGENCE AND TEACHER-STUDENT RELATIONSHIPS

*Anna Di Norcia (Dipartimento di Psicologia dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Giordana Szpunar (Dipartimento di Psicologia, Sapienza Università di Roma - Istituto Italiano di Tecnologia, Roma - IRCSS Fondazione Santa Lucia, Roma), Madalina Grigore (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Chiara Mascaro (Dipartimento di Psicologia Dinamica, Clinica e Salute, Sapienza Università di Roma)*

This study investigates how teachers' perceptions of Emotional Intelligence (EI) and student-teacher relationships (STR) relate to students' emotional and behavioral difficulties. Participants were parents and teachers (N=12, one teacher for each class) of 195 primary school children (age M=8.8; SD=.86). Parents filled the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997) to assess children's emotional and behavioral problems, and teachers filled the Emotional Intelligence Scale (EIS; Schutte, et al. 1998; Grazzani et al., 2009) and the Student-Teacher Relationship Scale (STRS; Pianta 1999; Molinari & Melotti 2010). Considering the EI score higher or lower than average, two groups of participants were created. Hierarchical regressions were conducted using STRS Dimensions as dependent variables, and children's age, gender and SDQ dimensions as independent variables. In the group with higher EI, children's hyperactivity, conduct and emotional problems relate to Conflict, Dependence and Closeness in the STR; in the group with lower EI only hyperactivity and conduct problems relate to Conflict and Dependence with teachers. In conclusion, teachers higher in EI can better differentiate the relation with their pupils considering their emotional and behavioral difficulties.

## METAEMOZIONI SCUOLA PROGRAM FOR DEVELOPING EMOTIONAL INTELLIGENCE ABILITIES AT SCHOOLS

*Alessandro Geraci (Università degli Studi di Palermo), Antonella D'amico (Università degli Studi di Palermo)*

MetaEmozioni-Scuola (MES) is a method that aims to promote emotional inclusion at schools, spreading the culture of emotional (EI) and meta-emotional intelligence (MEI) as an essential element for learning and inclusion. MES is divided into 5 steps respectively dedicated to: 1) discovering the world of emotions through emotional literacy activities; 2) create emotionally inclusive environments; 3) build tools, materials and methods for emotionally inclusive classrooms; 4) transform traditional education into emotionally mediated education; 5) become ambassadors of meta-emotional intelligence beyond school walls. To this end, teachers and students are trained through experiential workshops, followed by a remote tutoring activity through the online platform MES. We investigated the effect of MES training program in increasing EI, MEI and sociometric status in a sample of 264 pre-adolescent pupils of 5 Italian cities (Palermo, Bari, Cagliari, Rome and Turin). EI and MEI were assessed using IE-ACCME test whereas sociometric status was assessed through peer acceptance and rejection using sociogram techniques. Results indicate that participants in the experimental group reduced their tendency to overestimate their emotional abilities compared to the control group.

# CHILD DEVELOPMENT AS AN INTER-INDIVIDUAL PROCESS: A SYMPOSIUM ON TYPICAL AND ATYPICAL COMMUNICATIVE-LINGUISTIC DEVELOPMENT AND BEYOND IN HONOR OF LAURA D'ODORICO

*Proponenti: Alessandra Sansavini (Dipartimento di Psicologia, Università di Bologna - CLASTA), Nicoletta Salerni (Università degli Studi di Milano-Bicocca)*

The present symposium, involving Laura D'Odorico's closest collaborators, intends to discuss some theoretical and methodological aspects that have distinguished her studies on typical and atypical communicative-linguistic development and beyond, as the idea of child development as an inter-individual process, the emphasis on the interrelationships among different developmental domains and on interindividual differences to identify early risk indexes, and the use of direct observation as the preferential method for studying child development. In this view, two contributions examine some features of the maternal language input addressed to two different populations, preterm infants (Fasolo et al.) and children with cochlear implants (Majorano et al.), and their role in supporting language development. Other two contributions respectively investigate the associations between late talkers' gesture production and language development (Suttora et al.), and oral narrative competence of children with sex chromosome trisomies, in light of its role for learning skills (Zampini et al.). The last contribution (Cassibba et al.) explores the role of some environmental factors within educational settings during the pandemic in supporting social-emotional and cognitive development.

## MATERNAL SPEECH TO PRETERM INFANTS DURING THE FIRST YEAR OF LIFE

*Mirco Fasolo (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Infant-directed speech (IDS), the particular form of spontaneous language observed in interactions between parents and their infants, is a crucial aspect of the mother-infant interaction (Salerni, Suttora, D'Odorico, 2007). The present study aimed to explore linguistic and pragmatic features of IDS during mother-infant interactions at 3, 9 and 12 months of infant age. The effects of birth status (preterm vs full-term birth), and children' feedback on IDS was explored. One hundred and one mothers and their 3 month-old (corrected age for PT) infants (PT = 50 and FT = 50) participated in the study. Preterm infants born <37 week gestational age were included. Maternal vocal productions were coded in order to analyse: Verbosity, Lexical variability (TTR), Syntactic complexity (MLU), and Pragmatic meaning of utterances. Results evidenced few differences between the groups on IDS linguistic characteristics: these differences seem to be related to children's interactive behaviour, and specially with the frequency of vocalization. Salerni N, Suttora C, D'Odorico L. A comparison of characteristics of early communication exchanges in mother-preterm and mother-full-term infant dyads. *First Language*. 2007;27(4):329-346. doi:10.1177/0142723707081654

## TEMPORAL AND PROSODIC CHARACTERISTICS OF INFANT-DIRECTED SPEECH TO CHILDREN WITH COCHLEAR IMPLANTS

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Infant-directed speech (IDS) quantity and quality are important characteristics affecting child language acquisition (D'Odorico & Jacob, 2006). Language learning in children with cochlear implants (CIs) may benefit from a prosodically richer speech signal and from enhanced mother-child coordination in interaction. However, only a few studies have considered these aspects with children with CIs. This study aims to investigate the prosodic and temporal characteristics of IDS before and after CI activation and their relationship with child language outcomes up to three years after implantation in Italian-speaking children. Participants were 16 dyads of mothers and their children implanted between 10 and 36 months. Fundamental frequency characteristics and pitch range for each mother and mothers' and children's vocalizations, overlaps, and within- and between-speaker pauses in interaction were analyzed. Children's receptive vocabulary after implantation was also considered. Results indicate that children's vocabulary three years after implantation is negatively predicted by early maternal overlap frequency and positively associated with mothers' pitch range before implantation. These results suggest a positive role of prosody and temporal characteristics in IDS for children with CIs.

## INTEGRATING GESTURES AND WORDS TO COMMUNICATE: A STUDY ON LATE TALKERS

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Early use of gestures fosters language development (Capirci et al., 2005; Fasolo & D'Odorico, 2012), but studies on gestures in late talkers are limited. This study examined gestures, gesture-word combinations and their association with language skills in late talkers and whether specific individual and environmental factors accounted for interindividual differences in gesture use. The study included 61 late talkers (35 full-term and 26 low-risk preterm). At 30 months, parents filled in the Italian short forms of the MacArthur-Bates CDI and participated in a book-sharing session with the child. Children's pointing and representational gestures, words and gesture-word combinations were coded. Results showed that gesture-word combinations positively correlated with word tokens, MLU, expressive and receptive vocabulary. Gestures and gesture-word combinations were positively associated with low-risk preterm birth and higher cognitive scores, whereas negatively with male gender. Gesture use was also affected by birth order and parental age. Our findings highlight that, among late talkers, gesture and gesture-word combination use represents a point of strength promoting language acquisition with interindividual differences linked to intertwined individual and environmental factors.

## ORAL NARRATIVE COMPETENCE IN PRESCHOOL CHILDREN WITH SEX CHROMOSOME TRISOMIES

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The neuropsychological profile of children with sex chromosome trisomies [SCTs] is frequently characterised by delays and impairments in language development, though their cognitive level is generally in the normal range (Zampini et al., 2022). The present study aimed at analysing the oral narrative competence of preschool children with SCTs due to the implication of this skill on the following learning abilities. Participants were 34 children with SCTs one-to-one matched by age and sex to typically developing [TD] children. A storytelling task (Narrative Competence Task) was used to assess the macrostructural and microstructural features of the narratives. Children with SCTs showed significantly lower scores than TD peers in all the narrative indices considered, except for mental state lexicon and story length. The problems found in narrative competence confirmed the existence of delays and impairments in the language development of children with SCTs. The identification of a risk factor (D'Odorico & Zampini, 2013) in oral narrative competence could lead to precocious intervention to support these children's following learning skills and academic achievements.



## GROWING UP AT THE DAYCARE CENTER DURING THE PANDEMIC

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The pandemic emergency was managed by daycare centers through interpersonal distancing, the use of masks and the use of “bubbles”. The stress of caregivers, associated with the limitations of peer relationships and activities, can contribute to the weakening of children’s self-regulation abilities, both on an emotional and cognitive level (Di Giorgio et al., 2021). Outdoor activities, in addition to providing safe proximity, reduce stress levels and promote social-emotional and cognitive functioning (Monti et al., 2019). This study aims to test whether the daily experience of OA reduces children’s and caregivers’ stress, and promotes emotional, attentional, and behavioral regulatory skills. A total of 125 children (age  $M=23.8$ ) participated in the study, divided in outdoor education group ( $N=73$ ) and comparison group ( $N=52$ ). OE was monitored through observational data (D’Odorico, 1990). Results highlight that after the 4-months intervention of OE activities, attention, and two indicators of adaptive functioning (i.e., communication and social behavior) increased only among the OE group. Children’s and teachers’ stress remained stable. These findings show that OE might have a short-term positive impact on cognitive and social but not emotional regulation.

## PARENTING IN DIFFERENT CONTEXTS. AN EVIDENCE-BASED APPROACH

*Proponente: Giovanni Giulio Valtolina (Università Cattolica del Sacro Cuore)*

The symposium is organized by the AIP-SIPPED task force on pediatric psychology. Important focus of parenting studies are parent's beliefs, attitudes, goals, feelings, and knowledge. These ones are important to investigate because they are key to understanding parenting in its own right. They help to organise the world of parenting, since they affect parents' sense of self and their role as parents and generate and shape parenting everyday practices. Besides, they also affect children's development directly and indirectly. In the symposium it will be presented data coming from research carried out on different focus, such as parental burnout, child neglect assessment, the role of mothers' depressive symptoms on parenting, the parental ethnotheories in mothers with migratory background. In order to implement an effective support to parenting, an evidence-based approach is required.

## VALIDATION OF THE CHILD NEGLECT ASSESSMENT TECHNIQUE OF SIPPED

*Concetta Polizzi (Università degli Studi di Palermo - Società Italiana di Psicologia Pediatrica), Giovanna Perricone (Università degli Studi di Palermo - Società italiana di psicologia pediatrica), Rosanna Militello (Società Italiana di Psicologia Pediatrica - Istituto Gestalt H.C.C.), Maria Maddalena Di Pasqua (Italian Society of Pediatric Psychology, Istituto Gestalt H.C.C.), Valentina Fontana (Università degli Studi di Palermo - Società italiana di psicologia pediatrica)*

Child neglect is the more silent and common form of child maltreatment. In the perspective of Pediatric psychology, the cause is the dysregulation of the parental competence, as hypo/hyperstimulation, adultization/disclaimer, and hypo/hypercure. The aim is to validate the Child Neglect Assessment technique (C.N.A.), divided into two tools: a child neglect risk sheet and a coding scheme on the child neglect indicators. 130 judges were involved to measure the content validity of the coding scheme, and 90 parents of 3-9 year old children were involved to measure the reliability of this observation tool. Moreover, 165 judges were involved to measure the content validity of the child neglect risk sheet. The tools have an adequate validity of content and a good reliability. The degree of agreement among the judges has been tested with Fleiss' K, accepting all values with a  $k \geq 0.40$ ; two revisions led to the current form of the tools. The internal consistency was verified through the correlation between each item and the reference indicator (Cronbach's Alpha); the alpha values were always between respectable and good ( $\alpha = .70 - .90$ ). The technique allows to intercept the "signs" of a possible condition of child neglect in the here and time when the mistreatment is occurring.

## PRENATAL MATERNAL REPRESENTATIONS IN PRIMIPARAS AND MULTIPARAS DURING COVID-19: THE ROLE OF DEPRESSIVE SYMPTOMS. “EARLY PERINATAL RECOGNITION TO AVOID NEGATIVE IMPACT ON POSTNATAL PARENTING.”

*Martina Smorti (Università di Pisa), Lucia Ponti (Dipartimento di Studi Umanistici, Università di Urbino), Giulia Mauri (Università di Pisa), Francesco Soffio (Università di Pisa)*

Prenatal Maternal Representations (PMR) influence the subsequent mother-child bonding and parenting style. Literature showed that PMR could be negatively affected by depressive and psychosocial factors, such as the Covid pandemic. Therefore, the purpose of this study was to assess the difference in depressive symptoms and both in style and content of PMR in primiparas and multiparas women during Covid. 25 women (14 primiparas, 11 multiparas), recruited in the last trimester of pregnancy, responded to the Edinburgh Depression Scale (EDS) and to the Interviews for Maternal Mental Representations (IRMAG). The T-test showed significant differences in the EPDS level reporting higher depressive symptoms in primiparas than in multiparas. The  $\chi^2$  test showed that primiparas women reported more restricted MR (71.4%) than multiparas women (18.2%). In fact, contents of interviews show a lower sensitivity to the emotional aspects and a greater rationalization in primiparas. Multiparas did not report the same contents despite the lack of emotional sharing due to Covid restrictions, probably for the previous pregnancy experience. From a prevention point of view, a supportive intervention for primiparas should be required to avoid the negative impact on the quality of postnatal parenting.

## PARENTAL BURNOUT IN PARENTS OF CHILDREN UNDER THERAPY FOR LEUKEMIA: FACTORIAL ANALYSIS OF THE QUESTIONNAIRE AND POSSIBLE ASSOCIATIONS WITH BEHAVIORAL SYMPTOMS IN THEIR CHILDREN

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Parental burnout is a global exhaustion of the role of parent, an emotional detachment from children and a loss of self-perception as a good parent (Roskam & Mikolajczak, 2020). Parental chronic oppressive stress affects parent but also the child. This study aims at identifying the possible dimensions of Parental burnout in parents of children with leukemia and its possible associations with emotional and behavioral symptoms in their children. Participants who signed the informed consent were principally mothers ( $N = 47$ ; 92.2%) recruited at the Pediatric Onco-Hematology Clinic, University of Padua. The average age was 40.5 years ( $SD = 7.15$ ; range 22-54) and they mostly were married or cohabitants (91.1%). They filled in questionnaires on their Parental Burnout and CBCL about their children. A Varimax factor analysis found that the best model explained 44.4% of variance with two identified factors: "Parental inefficacy perception" and "Parental Exhaustion and Emotional Distance", with Cronbach alpha greater than 0.75. A series of Spearman's correlations were run, and significative associations were found between parental burnout and children's internalizing ( $\rho = 0.46$ ;  $p = 0.01$ ) and externalizing ( $\rho = 0.57$ ;  $p < 0.001$ ) symptoms. Parenting interventions should be set up.

## PARENTAL BELIEVES IN DIFFERENT ETHNIC GROUPS MOTHERS. AN EXPLORATIVE STUDY

*Giovanni Giulio Valtolina (Università Cattolica del Sacro Cuore), Paola Barachetti (Università Cattolica del Sacro Cuore)*

Some functions of maternal behaviour, in particular the specific ways in which a mother interacts with her child, depend on numerous variables related to her history, personality, network of relationships, beliefs, and values of her cultural tradition. Parents' beliefs about child development and the right way to raise them are mostly determined by their cultural background. Therefore, the purpose of this study was to investigate the differences between different parental ethno-theories in mothers of unlike ethnicities. 104 immigrant mothers, recruited through migrants' association, and 102 Italian mothers answered to a questionnaire covering six specific domains of parenting (nurturing, physical, social, educational, material, linguistic). All the participants have a child aged 12-24 months; the average age was 29.5 years (SD = 3.25; range 23-41); they were all married or cohabitants. The T-test showed significant differences in the two groups in all the domains considered, reporting higher level of nurturing parenting in immigrant mothers. This being the case, when planning prevention, an investment in intercultural education for primary care professionals should be considered.

# PEER RELATIONSHIPS AND SOCIO-EMOTIONAL PROCESSES: UNDERSTANDING THE RELATIONAL DEVELOPMENT FROM INFANCY TO EARLY ADULTHOOD

*Proponente: Andrea Baroncelli (Dipartimento di Filosofia, Scienze Sociali, Umane e della Formazione, Università degli Studi di Perugia)*

Relational processes experienced with others (i.e., in terms of acceptance and rejection among peers, social awareness and sense of belonging to the group, self-reflection on relational modalities implemented with others) represent key factors for the quality of developmental trajectories. The symposium in-depth investigates some classic constructs of social development by focusing on novel or understudied aspects. Involving samples ranging from childhood to young adulthood, the symposium investigates the role of new correlates (e.g., peer-estimated measures of callous-unemotional traits) to acceptance and rejection among peers, and how social preference and both social awareness and sense of belonging to the group mediate or moderate the associations between socio-emotional variables (e.g., regulatory processes and personal agency) and both internalizing and externalizing outcomes. Furthermore, the symposium investigates how social preference of students who took part in a Social Problem Solving intervention varies over time, and it focuses on self-reflections on relational modalities implemented within the context of COVID-19 pandemic. Emerged results are discussed in light of the ever changing nature of the developmental contexts in which relationships with others take place.

## THE ROLE OF PEER-ESTIMATED CALLOUS-UNEMOTIONAL TRAITS IN SOCIAL PREFERENCE AND PERCEIVED POPULARITY AMONG PREADOLESCENTS

*Andrea Baroncelli (Dipartimento di Filosofia, Scienze Sociali, Umane e della Formazione, Università degli Studi di Perugia), Paul J. Frick (Department of Psychology, Louisiana State University, USA), Carolina Facci (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Enrica Ciucci (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

The present study explored how some peer-estimated characteristics relating to externalizing problems (i.e., anger manifestations, disturbing behaviors, behaviors associated with callous-unemotional personality traits - measured alternatively with callous-meanness or cold-insensitiveness towards others) were uniquely associated with social preference (i.e., in terms of “liked most” and “liked least” peer nominations) and perceived popularity (i.e., in terms of “most popular” and “least popular” peer nominations), within a sample of 695 middle school students (352 girls, M age = 12.90 (.91) years). Linear regression analyses indicated that “liked least” classmates were seen by peers as higher in callous-unemotional traits ( $\beta = .22$ ,  $p < .001$  when callous-meanness was considered,  $\beta = .46$ ,  $p < .001$  when cold insensitiveness was considered). Moreover, cold-insensitiveness emerged as unique correlate of both “liked most” ( $\beta = -.32$ ,  $p < .001$ ) and “least popular” ( $\beta = .34$ ,  $p < .001$ ) conditions. Interesting, disturbing behaviors emerged as unique and positive correlates in defining “most popular” classmates ( $\beta_s = .21$  and  $.32$ ,  $p < .001$ ). These findings contribute to further clarify how different aspects of externalizing behaviors contribute to peer relationships among peers.



## SOCIAL PREFERENCE IN PRIMARY SCHOOL CHILDREN: THE ROLE OF PSYCHOLOGICAL DIFFICULTIES AND SOCIAL PROBLEM SOLVING SKILLS

*Anna Di Norcia (Dipartimento di Psicologia dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Eleonora Cannoni (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Martina Cammardella (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma)*

This study investigates how children's emotional and behavioral difficulties and social problem solving skills relate to social preference. Participants were 105 children (41 girls, mean age = 8,7) who attended six classes in the same school and participated to a training aimed to improve Social Problem Solving skills. Children filled peer nominations to evaluate social preference and SPS-Questionnaire (adapted from Schonfeld et al. 2012), they were tested at T1 (beginning 3rd Class), T2 (end 3rd Class), T3 (beginning 4th Class) and T4 (end 4th Class). Their teachers filled the Strengths and Difficulties Questionnaire (SDQ, Goodman, 1997). ANOVAs for repeated measures showed that children improved in Social Problem Solving skills, but social preference did not change across time. Regressions analyses showed that social preference was related to psychological difficulties (hyperactivity, conduct and emotional problems) and it was not related to social problem solving skills. In conclusion the study showed that social preference during primary school years appeared stable and relate to psychological difficulties even if children improve their social skills.

## SENSE OF BELONGING AT SCHOOL AND ITS ROLE IN REDUCING ANXIETY AND SELF-HARM AMONGST ADOLESCENTS

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During adolescence peer relationships can be protective factors that reduce anxiety and self-harm behavior. This dynamic becomes more important during pandemic times, especially in a school context of enforced distance learning. Our study examines the effect between grit (X) on anxiety (Y1) and self-harm (Y2) mediated by sense of belonging (M) in the classroom context. High school students (n=258; 81%F, mean age=17) from Piedmont responded to Panorama Education's Grit and Sense of Belonging, Spielberger's STAI-S, and Prinstein's NSSI scales in Spring 2021. Through a mediation analysis conducted with SPSS28, Process, Hayes' Model 4, we found that the relationship between grit and anxiety is partially mediated by the sense of belonging. In contrast, in the second case, we found there is a complete mediation effect between grit and self-harm, a relationship that exists only through the sense of belonging. In both cases, it is important for schools to find strategies which encourage individual adolescents to work on their grit and to support them at the classroom level in developing a sense of belonging in order to reduce these risk factors during times of crisis and beyond.

## THE ROLE OF EMOTION REGULATION AND SOCIAL PREFERENCE IN THE DEVELOPMENT OF BEHAVIORAL AND EMOTIONAL DIFFICULTIES

*Valentina Levantini (Università degli Studi di Udine), Marina Camodeca (Università degli Studi di Udine),  
Carmen Gelati (Università degli Studi di Milano-Bicocca)*

Emotion regulation skills may have significant implications for the development of children's emotional symptoms and conduct problems. Poor emotion regulation has also been linked to problematic peer relationships, which, in turn, are an established risk factor for later emotional and behavioral difficulties. The current study followed a 6-month longitudinal design to explore whether peer-reported social preference mediated the relation between emotion regulation skills, assessed with the Emotion Regulation Checklist, and emotional symptoms/conduct problems, evaluated with the Strengths and Difficulties Questionnaire teacher-report. The sample included 408 school-age children (200 boys and 208 girls, aged 8-11 years,  $M = 9.08$  years;  $SD = .92$ ). Results showed that greater emotion regulation predicted higher social preference ( $b = .098$ ,  $p < .001$ ), which in turn predicted lower conduct problems ( $b = -1.59$ ,  $p < .001$ ). A significant indirect effect of emotion regulation on conduct problems via social preference ( $b = -.157$  [-.296; -.055]) was also found. No significant indirect effects of emotion regulation on emotional symptoms through peer-rated social preference emerged. Findings are discussed in terms of the relevance of individual aspects and group dynamics in affecting behaviors.

## I CAN WRITE IT, BUT I CAN'T TELL": YOUNG ADULTS' RELATIONSHIPS AND DIFFICULTIES IN EXPRESSING EMOTIONS

*Luigia Simona Sica (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Sandra Parrello (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Interaction with environment requires individuals to be continuously able to regulate their emotions and relative expression. The pandemic period has produced a modification of spaces and methods of interaction, favoring reflection on significant experiences. This study was aimed at evaluating how and if modification of individual-context interaction has influenced the modalities of emotional regulation. Adopting a mixed approach, 80 participants aged between 18 and 53 were involved, through online data collection. The textual corpus (31098 occurrences) was analyzed through the Thematic Analysis of Elementary Contexts using T-Lab Plus. 572 elementary context units out of 712 were classified, obtaining 7 clusters: 1. Choose: guilt, uncertainty and loneliness, 2. Friendship: loneliness and hope 3. Difficult to explain emotions, even happiness, 4. Trying to grow and change to achieve serenity, 5. Difficult to talk about anger, but I can write about it, 6. Memories of family and evening outings, 7. Moments of pain and fear. The difficulty of expressing emotions, both positive and negative, was recognized and writing is considered a valuable resource. The most emotionally pregnant events have to do above all with friendships and growing up is also expected to improve individual emotional regulation.

# RELATIONAL PROCESSES IN OFFLINE AND ONLINE CONTEXT: ADOLESCENTS AND YOUNG ADULTS BETWEEN DEVELOPMENTAL TASKS AND NEW RISK BEHAVIORS

*Proponenti: Mara Morelli (Sapienza Università di Roma), Maria Rosaria Nappa (Dipartimento di Giurisprudenza, Economia e Scienze Umane, Università di Reggio Calabria)*

The symposium addresses protective and risk factors related to adaptive and maladaptive relational processes in adolescence and emerging adulthood. Contributions are focused on the developmental processes involved in online and offline contexts. Communication 1 by Milani and colleagues analyses the relationship between ambivalent sexism and the media diet (i.e., trap music, sexist TV broadcasts, social networks, sexist videogames) in a sample of young adults. Communication 2 by Nappa and colleagues explores the impact of social connectedness perceived in online contexts, including the connectedness with influencers, on face-to-face relationships among young adults. Communication 3 by Morelli and colleagues focuses on the relation between trait emotional intelligence and different sexting behaviors (i.e., experimental, risky, and aggravated) among adolescents. Communication 4 by Palladino and colleagues presents a longitudinal study on the role of tolerance and moral disengagement in adolescents bystanders' responses toward online ethnic hate speech. Communication 5 by Pace and colleagues investigates the role of narcissism, hyper-competitiveness, and maladaptive coping strategies on the development of pathological gambling in male adolescents.

## GENDER PREJUDICES AND MEDIATIC DIET: A CORRELATIONAL EXPLORATIVE STUDY

*Luca Milani (Università Cattolica del Sacro Cuore), Anna Invernizzi (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Sabrina Seccia (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Daniela Villani (Università Cattolica del Sacro Cuore)*

This study aims to analyze the mutual relationship among Gender Stereotypes and the media diet (musical fruition, tv broadcasts, videogames use and the use of social media) in a sample of young adults. It was further investigated the possible implication of empathy with gender stereotypes. 173 participants (36 males, 135 females and 2 non-binary people) were administered a survey comprising a questionnaire on media preferences and fruition frequency, the Ambivalent Sexism Inventory (ASI) and The Interpersonal Reactivity Index (IRI). Results show a correlation between some media and higher results in the Ambivalent Sexism Scale, i.e.: Trap music correlates significantly in a positive way with Hostile Sexism ( $r=0,19$ ;  $p<0,05$ ); searching fashion topics on social media was found to be positively correlated to an higher level of Benevolent Sexism ( $r=0,24$ ;  $p<0,05$ ) otherwise scientific divulgation topics were negatively correlated with BS ( $r= -0,18$ ;  $p<0,05$ ). Also, it was found a negative correlation between higher scores in IRI sub-scales and sub-scales of the ASI (i.e.: Perspective Taking and Benevolent Sexism  $r= -0,23$ ;  $p<0,05$ ). Therefore, a correlation between the mediatic diet and higher sexism scores can be confirmed, however empathy seems to be a protective factor against sexism.

## RELATIONSHIPS IN THE ERA OF INFLUENCERS: THE IMPACT OF SOCIAL MEDIA USE ON FACE-TO-FACE SOCIAL CONNECTEDNESS

*Maria Rosaria Nappa (Dipartimento di Giurisprudenza, Economia e Scienze Umane, Università di Reggio Calabria), Mara Morelli (Sapienza Università di Roma), Maria Giuseppina Bartolo (Dipartimento di Culture, Educazione e Società, Università della Calabria), Salvatore Ioverno (Università degli Studi Roma Tre)*

Scholars have underlined the existence of both negative and positive social media (SM) effects on socialization processes, depending on SM use and online relationship types. Thus, this study aims to investigate the impact of SM relationships, including those with influencers, on face-to-face social connectedness, considering the role of individual factors. A sample of 332 Italian young adults, aging between 18 and 30 ( $M = 21.8$ ;  $F = 84.5\%$ ), completed an online survey. Using hierarchical regression, we examined how age, sex, sexual orientation, online social connectedness, connectedness with influencers, social self-efficacy, and SM addiction could relate to offline social connectedness. Results showed that offline social connectedness was positively associated with online connectedness,  $\beta = .44$ ,  $p < .001$ , and social self-efficacy,  $\beta = .27$ ,  $p < .001$ , but negatively with SM addiction,  $\beta = \beta.17$ ,  $p < .001$ . Additionally, the negative association between users' connection with influencers, in terms of modeling, and offline social connectedness was partially mediated by social self-efficacy and SM addiction. This study highlights how those SM relationships could be problematic only in the presence of specific individual risk factors.

## IS THERE A RELATIONSHIP BETWEEN TRAIT EMOTIONAL INTELLIGENCE AND SEXTING BEHAVIORS IN ADOLESCENCE?

*Mara Morelli (Sapienza Università di Roma), Federica Graziano (Università degli Studi di Torino), Antonio Chirumbolo (Sapienza Università di Roma), Emiddia Longobardi (Sapienza Università di Roma), Elena Cattelino (Università della Valle d'Aosta)*

Previous research examined which personality traits are related to sexting behaviors using the Five Factors Model and the HEXACO personality model. To our knowledge, no study analyzed if trait emotional intelligence relates to sexting. Thus, the present study investigated the relation between the four factors of trait emotional intelligence (i.e., well-being, self-control, emotionality, sociability) and different forms of sexting (experimental, non-consensual, under pressure, and risky). A total of 760 Italian adolescents aged 14 to 19 years ( $M_{age} = 16.76$ ; 52.6% girls) completed an online survey. Logistic regression analyses showed that: 1) lower emotionality was related to higher involvement in non-consensual sexting,  $b = -0.07$ ,  $p = .002$ , sexting under pressure,  $b = -0.10$ ,  $p = .001$ , and risky sexting,  $b = -0.03$ ,  $p = .03$ ; 2) higher sociability was related to higher involvement in experimental,  $b = 0.05$ ,  $p = .002$ , non-consensual,  $b = 0.06$ ,  $p = .01$ , and risky sexting,  $b = 0.09$ ,  $p = .02$ ; 3) lower self-control was related to higher involvement in experimental sexting,  $b = -0.04$ ,  $p = .003$ ; 4) well-being was unrelated to sexting. This study expands knowledge about the link between personality factors and different kinds of sexting, providing suggestions for prevention programs.



## THE ROLE OF XENOPHOBIA ON ETHNIC HATE SPEECH EXPOSURE AND UP-STANDING: A THREE-WAVES LONGITUDINAL STUDY

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Nowadays adolescents have extensive access to ICTs, engaging in social networking activities and this may expose them to hate speech (HS). While there are cross-sectional studies about the effect of the Exposure to HS on attitudes and aggressive behavior, no study addresses the Up-standing behavior that people may have when exposed (e.g., reporting contents etc.). This study is specifically focused on Ethnic HS (EHS) and aims to analyze the longitudinal association between Xenophobia, Exposure, and Up-Standing behavior against EHS. For this purpose, a cross-lagged panel model including three waves of data collection was run. 662 Italian students (54,7% male; MAge=15[0.64]) nested in 36 9th grade classes took part in the study. While the variables resulted cross-sectionally correlated, longitudinal associations have been found between Xenophobia and Up-standing and vice versa. Moreover, Xenophobia longitudinally predicts Exposure. This is in line with previous studies highlighting, on the one hand, that attitudes predict behavior, and, on the other, that people develop their attitudes by observing their own behaviors. Regarding the impact of the phenomenon, the good news is related to the absence of longitudinal association between Exposure and both Xenophobia and Up-standing.

## THE ROLE OF NARCISSISM, HYPER-COMPETITIVENESS AND MALADAPTIVE COPING STRATEGIES ON MALE ADOLESCENT REGULAR GAMBLERS: TWO MEDIATION MODELS

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The present study aimed to explore the unique and common role that some cognitive, personality and relational characteristics play in male adolescents' regular gambling behavior. Participants were 273 male adolescents and young adults aged 15 to 19 recruited in sports betting centers. They completed the South Oaks Gambling Screen, the Narcissistic Admiration and Rivalry Questionnaire, the Hypercompetitive Attitude scale, and The Coping Strategy Indicator. The relationship between narcissistic rivalry and gambling was mediated by hyper-competitiveness and avoidant coping strategy. These findings suggest that narcissistic features and maladaptive coping strategies might be involved in the development of disordered gambling in youth, supporting a compensatory model of this addictive behavior and claiming for preventative actions that take into account the psychological vulnerabilities of adolescents and young adults.

# ADOLESCENTS' EMOTIONAL, SOCIAL, AND ACADEMIC ADJUSTMENT DURING THE COVID-19 PANDEMIC

*Proponente: Ersilia Menesini (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

In the context of the challenges prompted by the COVID-19 pandemic, it's interesting to focus the attention on the psychological, emotional, family and school consequences that the experience may have generated in relation to adolescence. The course of the pandemic over two years has represented a complex factor, alternating moments of intensive stress with others of temporary hopes. Growing up during the pandemic might have represented a major challenge today for young people across worldwide. However, literature on this field stressed the need to further understand factors and the mechanisms that explain interindividual differences in how adolescents have coped the pandemic (Branje et Morris, 2021). The contributions to this symposium will address the adolescents' adjustment as manifested in different contexts - family, school, community, e-learning environments - and using a multi-level definition of adjustment in relation to different outcomes, trying to disentangle resources able to buffer the impact of the pandemic: emotional, behavioral, social skills, self-regulation skills. Longitudinal designs, cross-cultural samples and the study of mediational and moderation processes represent strengths of the current symposium.

## THE RECIPROCAL ASSOCIATIONS BETWEEN INTERNALIZING SYMPTOMS, COVID-19 RELATED STRESS, AND REGULATORY EMOTIONAL SELF-EFFICACY IN ADOLESCENCE: A 3-WAVE LONGITUDINAL STUDY

*Lisa De Luca (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

Adolescents with pre-existing vulnerabilities experienced more COVID-19 related stress during the pandemic (Morales et al., 2022). However, the long-term effect of COVID-19 related stress on internalizing symptoms and emotional adjustment has been less explored. This study examined the reciprocal association between internalizing symptoms, COVID-19 related stress, and regulatory emotional self-efficacy in adolescence. Participants were 830 Italian adolescents (45.8% females;  $M=14.52$  years,  $SD=0.80$ ) from a three-wave data collection. Results from a Cross-Lagged Panel Model (CLPM) showed that internalizing symptoms predicted higher levels of COVID-19 related stress and lower levels of regulatory emotional self-efficacy over time. Instead, regulatory emotional self-efficacy predicted, over time, lower levels of internalizing symptoms and COVID-19 related stress. No cross-lagged effects from COVID-19 on the other variables were found. Findings suggest that internalizing symptoms represented a risk factor for perceiving higher stress during the pandemic, whereas regulatory emotional self-efficacy represented a protective factor. Besides, the pandemic did not have a negative impact on adolescents over time. The results will be discussed considering practical and clinical implications.

## PARENTAL SOCIALIZATION IN RESPONSE TO CHILDREN' NEGATIVE AND POSITIVE EMOTIONS DURING THE PANDEMIC ACROSS CULTURES

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Parental Emotion Socialization (PES) includes the ways by which parents express their emotional experiences and respond to their children's emotional expressions (Eisenberg et al., 1998). Previous studies showed associations between supportive PES strategies and child adjustment (Klimes-Dougan et al., 2007). The present study aims to contribute to the validity of the scale to examine PES in cross-cultural contexts, and to examine the association between PES and child adjustment during the pandemic. Parent-reports of the Emotion as a Child Scale (Magai & O'Neal, 1997) and of the CBCL (Achenbach, 1991) were collected via Qualtrics in 2020 and 2021, in convenience samples of 853 parents from Italy, Azerbaijan, and Zimbabwe (child M age = 12.60, 11.37, and 7.27, respectively). A correspondent data collection is ongoing in Colombia. Similarly across countries, factorial analyses supported a two-factor solution of supportive and unsupportive PES in response to positive and negative emotional reactions of their children. Similarly across countries, high unsupportive PES and low supportive PES were associated with child adjustment problems. The present work contributes to the discussion on the impact of PES on child socio-emotional

## ACADEMIC SELF-EFFICACY IN E-LEARNING ENVIRONMENTS DURING COVID-19 PANDEMIC: THE BUFFERING ROLE OF EFFORTFUL CONTROL

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The COVID-19 pandemic raised a global impact worldwide and the transition from face-to-face to on-line learning brought many challenges for students. Due to this unplanned e-learning environment, some cross-sectional studies have investigated students' perceived academic self-efficacy (ASE) during the pandemic, reaching mixed results. While some studies found that ASE was negatively impacted by the pandemic, others did not show these effects. Grounded in Bandura's self-efficacy theory, this study investigated how ASE changed during the pandemic, compared with previous academic years. Furthermore, we examined the buffering effect of effortful control (EC), consistent with previous studies documenting its crucial role in enhancing students' ASE. The study involved 635 students who self-reporting from 2016 (T1; grade 9) to 2019 (T4; grade 12), and then during the first lockdown (March-May 2020; T5; grade 13). Latent growth curve analyses revealed a non-linear trend of ASE with a stability across T1 and T4 and a significant decrease at T5. High levels of EC were linked with higher levels of ASE at T1 and to a slower decrease of ASE during the pandemic. Prevention efforts should target students' self-regulation abilities in order to buffer the effects of the pandemic on perceived ASE.

## THE IMPACT OF LIFE ENVIRONMENTAL SATISFACTION DURING THE COVID-19 PANDEMIC ON CHILDREN AND ADOLESCENTS' SOCIAL-EMOTIONAL ADJUSTMENT: A 15-MONTH LONGITUDINAL STUDY IN ITALY

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This study explores the longitudinal profiles of Life Environmental Satisfaction Changes (LESC) in different systems during the COVID-19 pandemic, evaluating their predicting role in shaping the longitudinal social-emotional adjustment in children and adolescents. 488 children ( $M_{age}=8.54$ ;  $SD=0.63$ ), and 129 adolescents ( $M_{age}=11.08$ ,  $SD=0.48$ ) completed two questionnaires, pre-COVID-19 (T1) and in June 2021 (T2). Results showed two profiles, the first (25%) characterized by a decrease in LESC, and the second by stable, high levels of LESC. LESC profiles moderated the impact of time on prosocial behavior and on positive self-efficacy in children and adolescents. Prosocial behavior decreased for both ages in the risk profile. Self-efficacy decreased in both profiles in adolescents, but only in the risk profile for children. Besides, only children were able to benefit from the stability in systems wellbeing during the pandemic, improving their levels of self-efficacy in managing positive emotions and increasing their propensity to take initiative or seek out and pursue classroom activities. Findings supported the impact of the pandemic on social-emotional adjustment especially for those who showed a disruption of systems' satisfaction, and this was more pronounced for adolescents.

# COGNITIVE, EMOTIONAL AND ENVIRONMENTAL FACTORS IN MATHEMATICAL LEARNING

*Proponente: Maria Chiara Passolunghi (Dipartimento di Scienze della Vita, Università di Trieste)*

In an increasingly technological and numeracy-based society, individuals' mathematical skills are a strong predictor of academic and career success, quality of life and health. Literature has shown that mathematical abilities are affected by multiple factors that could be early assessed to help monitoring students' learning outcomes. Hence, the aim of the present symposium is to shed light on environmental, cognitive, and affective factors associated with math learning focusing on different age groups starting from preschool to primary school children. Tobia will discuss the link between parents-child interactions with numerical content and their influence on children's symbolic and non-symbolic mathematical abilities. Traverso et al. will explore the role of executive functions and working memory in predicting different mathematical skills. Cuder et al. will address how the negative effect of math anxiety on diverse mathematical tasks is moderated by children's visuospatial working memory. Mammarella et al. will analyze how different components of math anxiety influence the performance on calculation problems by manipulating task stress level. Presentations will provide novel insights into the complex interplay of factors influencing different facets of math learning.



## THE RELATIONSHIP BETWEEN HOME NUMERACY AND CHILDREN'S MATHEMATICAL SKILLS: EVIDENCE FROM CROSS-SECTIONAL AND LONGITUDINAL DATA IN YOUNG CHILDREN

*Valentina Tobia (Università Vita-Salute San Raffaele Milano)*

The construct of Home Numeracy has been defined as parents–child interactions with numerical content. Most of the studies indicated a positive association between home numeracy and children's performance in math tasks, but some studies indicated a non-significant link. One of the possible reasons for these contrasting results is the use of one composite math score rather than specific measures in the math domain. Also, other variables related to the home environment, e.g. parents' mathematical skills, could play a role in influencing both home numeracy and children's math skills. In this talk, cross-sectional and longitudinal data on the relationship between home numeracy, parents' and children's math skills will be reported. 187 preschoolers participated in the study, and 135 of them were followed until the end of the 1st grade. Both symbolic and non-symbolic math skills were tested in children; home numeracy and parents' math skills were investigated with a questionnaire. Results showed both concurrent and longitudinal associations between home-related variables and some of the children's math skills. Also, differences in home numeracy between children with adequate and weak math skills were found. Perspectives on educational and clinical practices will be discussed.

## BEYOND WORKING MEMORY: THE ROLE OF EXECUTIVE FUNCTIONS IN MATHEMATICAL LEARNING

*Laura Traverso (Dipartimento di Scienze della Formazione, Università di Genova), Paola Viterbori (Dipartimento di Scienze della Formazione, Università di Genova), Maria Carmen Usai (Dipartimento di Scienze della Formazione, Università di Genova)*

The importance of working memory has been amply demonstrated in mathematical learning, whereas the specific contribution of executive functions, such as shifting and inhibition skills, is less clear in explaining individual differences and developmental change in mathematical cognition. We aim to present a set of studies that investigate how executive functions and working memory influence performance on diverse mathematical skills including number sense and arithmetic problem solving. Both cross-sectional and longitudinal designs were used with kindergarten and primary school age children. Results confirmed the greater importance of working memory compared to inhibition, nevertheless executive functions significantly contribute to mathematical learning, for example our results showed that inhibition and shifting (but not working memory) accounted for a critical phase of problem solving (i.e., devising a plan). Results are discussed in relation to the existing literature, with special attention to the theoretical and methodological issues regarding the developmental change of executive functions and their assessment across childhood.

## THE INTERACTION BETWEEN MATH ANXIETY AND VISUOSPATIAL WORKING MEMORY: A MODERATION ANALYSIS ON DIVERSE MATHEMATICAL SKILLS

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According to the Processing Efficiency Theory, math anxiety would interfere with working memory resources through intrusive thoughts, negatively affecting math abilities. Few studies have focused on exploring how the interaction between math anxiety and working memory can affect different types of mathematical tests, especially in primary school students. Thus, the aim of the present study was to assess whether the interaction between math anxiety and working memory had an influence on disciplinary skills, by performing a moderation analysis and examining simple slope effects on diverse MAmath tasks in a group of primary school children (n=197). Results showed that visuospatial working memory appeared to moderate the relationship between math anxiety and disciplinary performance when a calculation task was considered, finding that subjects with higher levels of working memory were more negatively affected by math anxiety. No interaction effect was found for the matrices reasoning task in which students' score was explained only by visuospatial working memory. Overall, results suggest that math anxiety and visuospatial working memory interact in determining performance on different disciplinary tasks and this effect could depend on specific strategies employed to solve the task.

## OVERT AND COVERT EFFECTS OF MATHEMATICS ANXIETY IN CHILDREN: BEHAVIORAL, COGNITIVE, EMOTIONAL AND PSYCHOPHYSIOLOGICAL COMPONENTS

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The present study aimed to analyze the different components of mathematics anxiety (MA) experienced while students were solving calculation problems by manipulating stress levels. A computerized math task was administered to 165 fifth-graders randomly assigned to three different conditions (positive, negative or control condition). Behavioral, cognitive and emotional responses were analyzed, as well as psychophysiological responses (skin conductance, and vagal withdrawal). Behavioral response improved in both positive and negative conditions, while the latter was associated with children's reportedly negative emotional state, worries and perceived lack of competence. Under the negative condition, the induced stress led to increased skin conductance and elevated cardiac vagal withdrawal in children. Our data suggest the importance of considering not only the more readily apparent stress effects during assessments, but also the emotional, cognitive and psychophysiological effects, which might have long-term consequences.

# INDIVIDUAL DIFFERENCES IN ENVIRONMENTAL SENSITIVITY ACROSS DEVELOPMENTAL PERIODS AND CONTEXTS

*Proponente: Francesca Lionetti (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Environmental Sensitivity (ES) is a trait and a meta-framework capturing theories on the individual – environment interplay. Over the last years, it has attracted an increased attention in the developmental psychology field. Across four contributions we present new empirical findings on ES from infancy to adolescence. The first contribution by Lionetti et al. introduces a newly developed set of stimuli for eliciting individual differences in infants' ES, and the stability of ES over time and ES associations with emotion recognition and regulation are presented. The second contribution presented by Nava targets primary school children, and investigates ES in relation to emotion regulation and prosocial competences at a behavioural and physiological level. The third contribution, presented by Moscardino et al., explores the moderating role of ES in relation to a school-based intervention aimed at promoting adolescents' cultural identity development. In the last contribution, Di Paola and Nocentini explore ES in a clinical sample as a moderator of child maltreatment on self-conscious emotions. Results converge on the notion that ES can be meaningfully assessed across developmental periods and contexts, with implications for child development theories and intervention programs.

## OBSERVER-RATED ENVIRONMENTAL SENSITIVITY IN INFANTS: STABILITY OVER TIME AND ASSOCIATION WITH EMOTION RECOGNITION AND EMOTION REGULATION

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Difficult temperament in infancy has been repeatedly reported as a marker of an increased Environmental Sensitivity (ES). However, it is negatively biased and does not capture other ES aspects, as reactivity to positive and sensory stimuli. In the current contribution we present a series of laboratory-based stimuli designed to elicit infant's reactivity to positive, negative and sensory stimuli. The sample includes 30 children assessed at 3 and 6 months of age (48% F). Bivariate correlations showed positive associations between reactivity to positive, negative and sensory stimuli. In line with the extant literature, at 3 months 20% of infants scored consistently high across stimuli, 29% were low and the majority, 51%, had medium sensitivity levels. A moderate degree of stability was found at 6 months. Infants that scored high in ES also presented a higher looking time in an emotion recognition peekaboo task, which is consistent with the theoretical definition of ES as implying a deeper processing of stimuli. By the time of the symposium, data on observed emotion regulation strategies during the Still-face paradigm will be available. The findings provide preliminary evidences that differences in ES can be observed in infants as young as 3 months.

## THE ROLE OF ATTACHMENT IN THE DEVELOPMENT OF EMOTION REGULATION AND PROSOCIAL BEHAVIOUR AND THE MODERATING ROLE OF ENVIRONMENTAL SENSITIVITY

*Elena Nava (Università degli Studi di Milano-Bicocca)*

According to the Environmental Sensitivity framework, highly sensitive individuals possess increased emotional reactivity and empathy, accompanied by lower thresholds to sensory stimuli. These features appear to support the successful socio-cognitive development of highly sensitive children, depending on the type of environment they grow in. Here we assessed whether individual differences in sensitivity to stimuli moderate emotion regulation and prosocial behaviour in school-aged children as a function of the quality of their attachment. We measured skin conductance response while children viewed emotional video clips, and asked them to rate the pleasantness of the stimuli under two conditions: Baseline and Relax, in which children were asked to actively moderate their emotions when viewing the clips. Preliminary data revealed that at Baseline, highly sensitive children presented lowest arousal when presented with negative emotions, but only when the quality of the attachment was high, while children with low attachment quality presented highest arousal. Interestingly, the high sensitivity trait did not modulate prosocial behaviour, suggesting that the trait influences emotional capacities but not behaviours that are likely regulated by social norms.

## DOES ENVIRONMENTAL SENSITIVITY MODERATE INTERVENTION EFFICACY IN MULTICULTURAL CONTEXTS? FINDINGS FROM THE ITALIAN IDENTITY PROJECT

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Environmental sensitivity (ES) is an inborn trait that increases vulnerability to negative events, but it also renders individuals more susceptible to positive environments. Previous research suggests that highly sensitive adolescents benefit more from psychological interventions, but the role of ES in moderating intervention efficacy in multicultural settings is still unknown. In this study, we used data from the Italian adaptation of the Identity Project, an 8-week, school-based curriculum promoting adolescents' cultural identity (Umaña-Taylor & Douglass, 2017), to examine whether intervention efficacy varied according to youths' ES. Participants were 744 ethnically diverse adolescents (Mage = 15 years, 53% girls) attending upper secondary school. Classrooms were randomly assigned to the intervention (n = 23) and control group (n = 22), with students being assessed 1 week before and 1 week after the intervention. Results indicated that in the intervention (vs. control) group, immigrant-origin students with high levels of ES reported significantly more cultural identity exploration than their non-immigrant, low sensitive peers. The findings provide initial evidence for the vantage sensitivity proposition in the realm of psychological interventions targeting multiethnic youth.



## THE RELATIONSHIP BETWEEN CHILDHOOD TRAUMA AND SELF-CONSCIOUS EMOTIONS: THE ROLE OF ENVIRONMENTAL SENSITIVITY

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The association between childhood maltreatment and self-conscious emotions has been proved by the literature (Webb et al., 2007), but with limited attention to the specific mediation and moderation mechanisms involved. Individual trait of environmental sensitivity might play a role, reflecting emotional responsiveness and ease of overstimulation in response to negative and positive family experiences (Greven, et al., 2019). The current study aims to test whether the effects of childhood maltreatment on self-conscious emotions of shame and guilt might be more pronounced in children scoring high in environmental sensitivity. The sample includes a clinical sample of 128 children with behaviour problems followed by the IRCCS Stella Maris (Mage=9.05; SD=1.34). Results showed the significant interaction between maltreatment and environmental sensitivity on guilt and shame ( $B=1.81$ ,  $SE=.84$ ,  $p<.05$ ;  $B=1.69$ ,  $SE=.83$ ,  $p<.05$ ): highly sensitive children presented higher levels of shame and guilt following maltreatment experiences as compared to low sensitive children. Findings contributed to the literature on the role of environmental sensitivity as an individual trait able to moderate the effect of a contextual experience, testing these effects on emotional outcomes not yet studied.

## PARENTING AND SUPPORTING PARENTHOOD IN INFANCY IN CHALLENGING CONTEXTS

*Proponente: Angelica Arace (Dipartimento di Filosofia e Scienze dell'Educazione, Università degli Studi di Torino)*

Parenting represents an all-encompassing-ecology for infant development (Bornstein & Bornstein 2007), which has short- and long-term effects in several areas of children's social, emotional and cognitive functioning. It is therefore important to deepen individual, relational and contextual factors on which to intervene early to support parents in facing both developmental tasks typical of early childhood, which are dealt with by the contribution of Arace, Prino and Scarzello, and more critical events challenges such as the atypical development faced in the work of Boldrini and colleagues or the adaptation to the social changes induced by the COVID-19 pandemic dealt with by Molina and colleagues and Ragni and De Stasio, which can undermine parental self-efficacy and increase parental stress. The contributions show that it is essential, especially in times of crisis, to implement contextual protection factors, such as strengthening the network of local services for children, raising awareness among child health professionals and promoting the engagement of families by preschool educational services with respect to sharing care practices and educational goals, both in typical development transitions and, even more so, in the critical changes induced by the pandemic.

## HIGH-CONTACT NURSING PRACTICES IN INFANCY: BELIEFS OF MOTHERS AND NURSERY EDUCATORS

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Parental beliefs represents a road map that guides parents' daily decisions on how to respond to the developmental needs of children and which methods of care and parenting to adopt. For parents of children attending the nursery, sharing these beliefs with professional caregivers can fuel engagement practices and guarantee children continuity of bonds and a stable and supportive community (Brazelton & Greenspan, 2000). The research aimed to compare the beliefs of mothers and nursery educators in a sample of 487 mothers of children aged between 1 and 4 years ( $M=3.58$ ; males 52.7%) and 118 educators through a questionnaire on parental ethnotheories (Keller, 2007), breastfeeding and co-sleeping. Results indicate that mothers and educators share a model of care that favors relational interdependence, support the importance of prolonged breastfeeding beyond 12 months even at the nursery (41% mothers; 58.3% educators) and practice co-sleeping (78.3% mothers; 91.7% educators), care practices towards which they express a high degree of satisfaction. Emotional fatigue or discomfort have been reported only in very low percentages. These results invite careful reflection on the psychosocial factors that influence the narrative of motherhood in terms of intensive mothering (Haye, 1996).

## PARENTAL SELF-EFFICACY AND PARENTING STRESS IN PARENTS OF ATYPICAL DEVELOPMENT CHILDREN ONE YEAR AFTER COVID-19 PANDEMIC

*Francesca Boldrini (Lumsa Università di Roma), Benedetta Ragni (Università degli Studi di Foggia), Teresa Grimaldi (Ospedale Bambino Gesù), Rosaria Giampaolo (Ospedale Bambino Gesù)*

It is known that parenting a child with atypical development is more challenging than parenting a typical development child. The main aim of the current study was to explore differences between parental self efficacy and parenting stress of a group of Italian parents of children with atypical development and .of a typically development children group recruited one year after COVID-19 pandemic.176 parents of children (0 to 6 years) were recruited, 68 of the clinical group. Parents completed an online assessment including: PSI (Parenting Stress Index-SF), PSAM (Parental Self-Agency Measure) and TOPSE (Tool to Measure Parenting Self-Efficacy). The Italian validation of the TOPSE was performed. Two independent groups t-test revealed statistically significant differences for the TOPSE “play/enjoyment” ( $t(134) = -1,93, p < 0.05$ ), “self-acceptance” ( $t(134) = -2,21, p < 0.05$ ) and “learning/knowledge” subscale ( $t(134) = -3,37, p < 0.01$ ) and with higher scores reported by the control group. Higher parenting stress was detected in the clinical group compared to the control group ( $t(134) = 130,7, p < 0.01$ ). Identifying factors associated to parental self-efficacy in infancy can be important to develop tailored interventions early supporting parenthood.

## SNAPSHOT OF RESTART: 0-6 SERVICES AND PARENT'S INVOLVEMENT

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Pre-school services were largely affected by the COVID19 pandemic, and their daily routine abruptly changed to meet health needs. In many cases, the reorganization of daycares and schools had an important impact on the presence of parents and on the relationships with families as well. Starting from an ample survey encompassing about 1800 preschool services, with the support of the GNNI, we will present the data concerning the choices of the educational équipes and the effects on parents' involvement. The first results show that about half of the services involved parents in the choices concerning the restart of educational activities in September 2020, but frequently the involvement consisted in the communication of the staff decision or in a signature of a co-responsibility pact about the new organization. The presence of parents during the settling-in phase (83.1%) or during the daily entry and exit (44.6%) was maintained, even if with limits and cautions. The meetings with parents were maintained as well, although principally online, both one-to-one interviews (52.7%) and group encounters (78.2%). These results support the relevance of a reflection on the strategies allowing to maintain relationships and safeguard the shared educational priorities whit families.

## PARENTAL ANXIETY, FEAR OF COVID-19 AND PARTNER INVOLVEMENT IN CHILDREN'S CARE: RISK AND PROTECTIVE FACTORS FOR CHILDREN AND PARENTS SLEEP QUALITY DURING COVID-19 PANDEMIC

*Benedetta Ragni (Dipartimento di Studi Umanistici, Università degli Studi di Foggia), Simona De Stasio (Dipartimento di Scienze Umane, Lumsa Università di Roma)*

Few studies have investigated children and parental sleep during COVID-19. This study has two aims: verify changes in children and parental sleep before and after COVID-19 first lockdown; examine relationships between children negative emotionality, partner involvement in children's care, parental anxiety and fear of Covid, and sleep of children and parents. 264 parents of children (1-6 y.) completed: BISQ-R, ISI, CBQ, Who Does What, Fear of COVID-19, GAD-7, in 2021. Paired t-test was performed to detect possible changes in children and parents sleep. Path analysis tested associations between studied variables (Mplus v8.3). Pediatric insomnia symptoms decreased with time, while poor sleep-related behaviours at bedtime increased. Parental anxiety and fear of COVID-19 resulted associated with parental insomnia ( $R^2 = .27$ ,  $p = .000$ ) and poor sleep-related behaviours at bedtime ( $R^2 = .12$ ,  $p = .002$ ). Children negative emotionality was related with pediatric and parental insomnia ( $R^2 = .13$ ,  $p = .001$ ) while partner involvement in children's care to lower levels of poor sleep related behaviours at bedtime ( $b = -.190$ ,  $p = .001$ ). Results inform parents, healthcare providers and the general public on the risk and protective factors related to children and parental sleep in time of crisis.

# PHYSIOLOGICAL CORRELATES OF EMOTION REGULATION COMPETENCE ACROSS AGES AND RELATIONAL CONTEXTS

*Proponente: Maria Spinelli (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Emotion regulation competence allows children to manage responses to arousal events, in order to behave in the most congruent way with situational demands, promoting social adjustment in different contexts. To the emotional experience observed at a behavioral level correspond physiological and neural correlates whose examination gives an important advance in developmental research. The present symposium aims to provide an overview on recent findings on the topic by bringing together four studies taking into consideration, from different perspectives, physiological and neural correlates of children's emotional competence such as the Respiratory sinus arrhythmia, the frontal EEG asymmetry scores, the salivary cortisol levels, and the cardiac vagal tone. These aspects are examined at different developmental ages -early and late infancy, preschool age, and school age- and in the relational contexts which are more relevant for each age: the mother-infant interaction, the relationship with parents and daycare teachers, and the cooperation with peers. The analyses of physiological correlates are combined with observations, empirical tasks, questionnaires, and administered tests with the aim to explore associations among several variables.

## THE ROLE OF BIO-BEHAVIOURAL DYADIC SYNCHRONY IN THE DEVELOPMENT OF 3-MONTHS-OLD INFANT'S EMOTION REGULATION ABILITIES

*Maria Spinelli (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara), Silvia Ponzetti (Università degli Studi G. d'Annunzio di Chieti-Pescara), Maria Concetta Garito (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Emotion regulation origins very early in human life and develops thanks to the interactions between the infant and the caregiver. In particular, dyadic synchrony, the mother-infant dynamic matching of individual cues, is considered the core promotor of it. The present study aimed to explore infant emotion regulation as related to bio-behavioural dyadic synchrony. We collected behavioural and physiological (RSA values) infant's and mother's (n = 31) simultaneously functioning during the Still-Face Paradigm at 3 months of infant age. Behavioural synchrony was examined by coding patterns of co-regulated attention and affect. Physiological synchrony was examined by correlating infant's and mother's RSA values. Emotion regulation was examined as infant's negative affect and RSA mean values during the still-phase. Higher behavioural (symmetrical co-regulation) and physiological synchrony (RSA correlation) during the interaction were associated with infant's better emotion regulation abilities, as lower negative affect and higher RSA during the still-phase. Infants from dyads with better bio-behavioural synchrony (higher association between behavioural and physiological synchrony) showed better emotion regulation. Implications are discussed.



## FRONTAL ALPHA ASYMMETRY DURING A SOCIAL STRESS IN INFANCY: PRELIMINARY RESULTS ON SEX DIFFERENCES

*Isabella Mariani Wigley (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Roberta Nossa (Bioengineering Laboratory, Scientific Institute IRCCS "Eugenio Medea", Bosisio Parini, Lecco), Annalisa Castagna (0-3 Center for the at-Risk Infant, Scientific Institute IRCCS "Eugenio Medea", Bosisio Parini, Lecco), Eleonora Mascheroni (0-3 Center for the at-Risk Infant, Scientific Institute IRCCS "Eugenio Medea", Bosisio Parini, Lecco), Caterina Piazza (Bioengineering Laboratory, Scientific Institute IRCCS "Eugenio Medea", Bosisio Parini, Lecco), Sabrina Bonichini (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Gianluigi Reni (Bioengineering Laboratory, Scientific Institute IRCCS "Eugenio Medea", Bosisio Parini, Lecco), Rosario Montiroso (0-3 Center for the at-Risk Infant, Scientific Institute IRCCS "Eugenio Medea", Bosisio Parini, Lecco)*

Hemispheric asymmetry of frontal alpha-band (FAA) is a biomarker of emotional regulation. Recent studies have shown sex differences of the FAA index in infants coping with a social stress condition. The aim of this preliminary study is to investigate possible differences between males and females in the FAA index during a social stress condition in full-term infants. During a double Face-to-Face Still-Face (FFSF) paradigm, the EEG signal was recorded in 10 infants aged 6-12 months ( $F = 5$ ). After spectral analysis of the EEG signal, the index of FAA (i.e., frontal right alpha – frontal left alpha) was computed. Friedman test revealed an effect tending toward significance of FFSF episodes ( $\chi^2=8, p=.092$ ). Non-significant effect of gender on FAA index across the FFSF episodes was detected using Mann-Whitney test. However, females exhibited stronger left shift of FAA from Reunion#1 to Reunion#2 ( $M = 4.87, SD = 2.20$ ) compared to males ( $M = 1.41, SD = 2.76$ ), ( $U = 3.0, p = .082$ ). As the Reunion episodes are indicative of individual social stress recovery skills, our results suggest that sex may play a key role in emotional regulation as expressed by frontal alpha-band activity in presence of a reiterated stress recovery condition (Reunion#2, Reunion#1).

## CHILD'S TEMPERAMENT, CAREGIVERS' STRESS, AND CHILD'S EMOTIONAL-REGULATORY FUNCTIONING IN DAYCARE CENTERS

*Tamara Bastianello (Università di Verona), Pasquale Musso (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Chiara Zusi (Università di Verona), Fabiola Silletti (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro' - Università di Aarhus, Danimarca), Elena Florit (Dipartimento di Scienze Umane, Università di Verona), Claudio Maffei (Università di Verona), Manuela Lavelli (Università di Verona)*

The pandemic emergency has increased the risk for children's psychological well-being. So far, caregivers' stress and children's self-regulatory difficulties have been investigated in the context of the parent-child (from 2-years upward) relationship, through parent reports (Di Giorgio et al., 2021; Spinelli et al., 2020). The study investigates regulatory functioning among younger children through a physiological measure, in relation to the parent- and teacher-perceived stress, and parent/teacher reports of child's functioning. 138 children (Mage=23.4 months, F = 71) attending daycare centers with their parents and teachers were recruited. Measures include the child's salivary cortisol (biological stress-marker), indicators of socio-emotional-regulatory and adaptive behavior (Bayley scales), temperament (IBQ/ECBQ), and parent/teacher's stress (PSI). Results of a SEM ( $\chi^2(26)=29.09$ ,  $p=.031$ , CFI=.987, RMSEA=.029, SRMR=.041) show that child's temperament (negative affect and low effortful control) impacts significantly maternal stress, which, in turn, impacts child's stress (cortisol level) in a negative circle. Child's effortful control is also directly associated with the Bayley indicators of adaptive behavior. The model shows no associations between child's and teacher's stress.

## SCHOOL AGE CHILDREN'S COOPERATING BEHAVIORS: THE ROLE OF STRESS AND CARDIAC VAGAL TONE

*Libera Ylenia Mastromatteo (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Sara Scrimin (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Cooperation is the human tendency to work together to meet the same end. Self-regulation, indexed by cardiac vagal tone (rMSSD), is thought to favor pro-social behaviors but studies on the cooperation-regulation link are scarce especially in children exposed to stress. The current study addresses the relation between cooperation, stress and rMSSD in 36 primary school children. Children (Mage=8.92, SD=1.34) played two rounds (i.e., control and a stress condition) of the Stag Hunt game that required choosing whether to cooperate or not. Children's heart rate was registered at rest. Findings show how cooperation increase with age and is related with rMSSD in a quadratic fashion. Overall, children cooperate more when in the control as opposed to the stress condition. A logistic regression showed a rMSSD-stress interaction predicting children's cooperating behaviors ( $B=.002$ ,  $SE=.001$ ,  $t=2.06$ ,  $p=.04$ ). Under stress children with higher rMSSD cooperated more than worst regulators. In addition, high rMSSD promoted cooperation in younger children ( $B=-.002$ ,  $SE=.001$ ,  $t=-2.29$ ,  $p=.03$ ). These finding suggest the usefulness to promote prevention programs to increase children's self-regulation abilities to promote cooperative behaviors in stressful situations and among younger kids.

## PROMOTING PROSOCIAL BEHAVIOR FROM TODDLERHOOD TO PREADOLESCENCE

*Proponenti: Elisa Brazzelli (Università degli Studi di Milano-Bicocca), Ilaria Grazzani (Università degli Studi di Milano-Bicocca)*

Prosocial behavior concerns actions intended to benefit others without providing the helper an immediate payoff (Eisenberg et al., 2006). The awareness that prosocial skills begin to develop during the early years, with lasting implications for social lives, underpins increasing efforts to find ways of promoting prosocial behavior in children (Spinrad & Gal, 2018). The contributions of this Symposium offer an overview of the ways to promote prosocial behavior from toddlerhood to pre-adolescence in educational and school context. Brazzelli and Grazzani examine the efficacy of a conversation-based intervention (TEPP), conducted at nursery, in fostering toddlers' prosocial behavior. Cigala and Mori report on a study examining how training preschool children in perspective taking may promote their positive behavior in kindergartner. Zava and Vecchio present the results of the CEPIDEAS Junior primary school prosociality education program, discussing the effects of the intervention on the empathic self-efficacy and empathy. Conte and colleagues describe the effectiveness of PROMEHS, a European school-based mental health program, in the promotion of social-emotional learning competences and prosocial behaviors in a sample of students attending middle secondary school.

## TEPP: A CONVERSATIONAL TRAINING TO PROMOTE TODDLERS' PROSOCIAL BEHAVIOR

*Elisa Brazzelli (Università degli Studi di Milano-Bicocca), Ilaria Grazzani (Università degli Studi di Milano-Bicocca)*

Within the flourishing area of research examining the role of conversation about inner states in the development of socio-emotional competence, this study makes an original contribution by focusing on the effects of a conversational intervention (TEPP) on toddlers' prosocial behaviors. The study consisted in three phases: pre-test, intervention, and post-test. 142 toddlers ( $M=29.78$  months; range=22–36) took part in the study. They were administered the BPS-I and parents completed the EmQue-I13 and the CPBQ, concerning toddlers' empathy and prosociality. During the intervention trained teachers read prosocial stories to small groups of children and then involved them in conversations about inner states and prosocial behavior (Condition 1), in conversations about concrete actions and physical states (Condition 2), or in free play activities (Condition 3). Children in Condition 1 were found to outperform their peers in Conditions 2 and 3 on empathic ( $F(2,61)=2.957, p=.05$ ) and prosocial abilities (BPS-I:  $F(2,61)=8.664, p<.05$ ; CPBQ:  $F(2,61)=5.098, p<.05$ ). Results suggested that converse about inner states and prosocial actions can improve the development of toddlers' prosocial skills, encouraging the implementation of early education programs targeting prosociality among peers.

## PROSOCIAL BEHAVIOR AS AN INDICATOR OF MALTREATED CHILDREN'S SOCIAL ADJUSTMENT AMONG PEERS AT PRE-SCHOOL AGE: A TRAINING FOCUSED ON PERSPECTIVE TAKING

*Ada Cigala (Dipartimento di Discipline Umanistiche, Sociali e delle Imprese Culturali, Università di Parma), Arianna Mori (Università di Parma)*

Literature reveals that perspective taking (PT) positively influences the prosocial behavior (PB), while psychological maltreatment impairs the children's social adjustment. The main aim of the research was to investigate the relations between PT and social adjustment in preschool children from maltreating and non-maltreating family contexts. A second purpose was to prove the effectiveness of a training program aiming to improve PT in victims of psychological maltreatment. This research involved 249 preschoolers (43 from psychologically maltreating families). PT was measured using several task, and PB and aggressiveness were observed via non-participant observations in the school context. The training involved maltreated children in small-group meetings. The linear regression analysis show that affective PT ( $b = 0.60$ ,  $SE = 0.03$ ,  $p = 0.032$ ), and the presence of maltreatment ( $b = -2.11$ ,  $SE = 0.92$ ,  $p = 0.022$ ) were significant predictors of PB. The training results (pre/post comparison) showed an increase in PB ( $F=15.95$ ,  $p < .001$ ) and decrease in aggressiveness ( $F=4.28$ ,  $p < .05$ ). Results indicate that the affective PT represents a protective factor which can be strengthened in order to improve the social adaptation in preschooler victims of psychological maltreatment.

## PROMOTING EMPATHIC RESPONDING WITH THE CEPIDEAS JUNIOR PROGRAM IN PRIMARY SCHOOL

*Federica Zava (Università degli Studi Roma Tre), Isabella Giacchi (Università degli Studi Roma Tre),  
Giovanni Maria Vecchio (Università degli Studi Roma Tre)*

Empathy is an important component of social and emotional adjustment across development and plays a major role in the promotion of prosocial behavior (Eisenberg et al., 2014). Empathy has been promoted in various prevention programs to favor the positive development of children (Malti et al., 2016). The CEPIDEAS Junior is a program based on the prosocial education in primary school that includes, among the different components, the development of sympathy. This study aimed to evaluate the effects of the program on empathic responding (e.g., sympathy, empathic self-efficacy, and prosocial behaviors). Participants were 1055 children ( $M = 8.54$  years,  $SD = .87$ , 46.8% girls; control group = 49.4%). Empathic self-efficacy scale (Caprara & Gerbino, 2001) and a teacher report of sympathy and prosocial behaviors were used (Zhou et al., 2003; Caprara et al., 1993). Results of repeated measures ANOVAs showed that empathic self-efficacy increased in the intervention group [ $F(1,961) 44.481$ ;  $p < .001$ ;  $\eta^2 .04$ ], as well as teachers' reported sympathy [ $F(1,721) 71.580$ ;  $p < .001$ ;  $\eta^2 .09$ ] and prosocial behaviors [ $F(1,967) 29.859$ ;  $p < .001$ ;  $\eta^2 .03$ ]. We will explore with further analysis (LDS model) the possible mediation of the increase of sympathy and empathic self-efficacy on prosocial behaviors.

## IMPROVING SEL AND PROSOCIAL BEHAVIORS IN MIDDLE SECONDARY SCHOOL: THE EFFECTIVENESS OF THE PROMEHS CURRICULUM ON ITALIAN STUDENTS

*Elisabetta Conte (Dipartimento di Scienze Umane per la Formazione 'Riccardo Massa', Università degli Studi di Milano-Bicocca), Ilaria Grazzani (Dipartimento di Scienze Umane per la Formazione 'Riccardo Massa', Università degli Studi di Milano-Bicocca), Veronica Ornaghi (Dipartimento di Scienze Umane per la Formazione 'Riccardo Massa', Università degli Studi di Milano-Bicocca), Valeria Cavioni (Dipartimento di Scienze Umane per la Formazione 'Riccardo Massa', Università degli Studi di Milano-Bicocca), Alessia Agliati (Dipartimento di Scienze Umane per la Formazione "Riccardo Massa", Università degli Studi di Milano-Bicocca), Sabina Gandellini (Dipartimento di Scienze Umane per la Formazione 'Riccardo Massa', Università degli Studi di Milano-Bicocca)*

Preadolescence is a critical period for the onset of mental health issues. Thus, secondary schools have a responsibility to promote students' mental health and prevent social, emotional, and behavioral problems. This contribution presents the results of PROMEHS, a European school-based, universal mental health program. Participants were 433 Italian students (11-13 years; 217 females), split into experimental and control groups. Teachers completed two questionnaires, at the beginning and end of 2020/21 school year: the Social Skills Improvement System, Social Emotional Learning Edition (SSIS-SELb), measuring their students' social-emotional learning competences; and the Strengths and Difficulties Questionnaire (SDQ), assessing students' mental health (i.e., prosocial behaviors, internalizing and externalizing problems). Between the pre- and post-test phases, teachers in the experimental group were trained on school mental health themes and carried out PROMEHS activities in their classrooms. Multivariate analysis showed that students in the experimental group significantly outperformed the control group in social-emotional learning competences (i.e., self-awareness and relationship skills;  $p=.04$ ) and prosocial behaviors ( $p<.001$ ). Implications of these findings will be discussed.



## EMOTIONS, AFFECTS AND RELATIONSHIPS IN PARENTING: RISK AND PROTECTIVE FACTORS IN THE DEVELOPMENT OF THE FAMILY SYSTEM

*Proponente: Enrica Ciucci (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

According to the family systems theory, a family forms an emotional unit, a dynamic system in which members continuously affect each other. The quality of parent-child relationships is a crucial factor for adaptive or maladaptive mental health outcomes, and it offers a context to learn how to deal with emotions and promote well-being. The present symposium in-depth investigates the affective dimensions that characterize relationships in the family system. Two contributions studied the role of parents' emotion regulation, measured as strategies performed by parents, or perceived by children in terms of their attachment to mothers and fathers, in relation to child characteristics (e.g., anxiety, ADHD). The other contributions empathised the role of emotions and affects between parents and children - both perceived by children themselves or experienced by parents towards their children - in influencing parenting practices and the quality of time spent together. The findings highlight the importance to consider aspects related to parental affects and parenting practices for the in-depth understanding of multiple risk and protective factors in the developmental trajectories of family members, from both research and clinical point of view.

## THE EFFECT OF HELICOPTER PARENTING ON CHILD ANXIETY IN MOTHER-FATHER FAMILIES DURING THE COVID-19 PANDEMIC: THE ROLE OF CHILD-PARENT ATTACHMENT SECURITY

*Demetria Manzi (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia),  
Lavinia Barone (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia)*

Due to home confinement, helicopter parenting likely increased child anxiety during the COVID-19 pandemic. Under such circumstances, a secure child-parent attachment relationship may have been protective, as the child could turn to their parent(s) in time of distress. This study examined the moderating role of child attachment security to mothers and fathers in the relationship between maternal and paternal helicopter parenting on child anxiety. Participants were 199 children (50.8% girls,  $M = 9.50 \pm 1.27$ ) raised in mother-father families, who filled-in the 15-item Security Scale and the 15-item Helicopter Parenting questionnaires, both for mothers and fathers, and the 38-item Screen for Child Anxiety Related Emotional Disorder questionnaire. The main and interactive effects of maternal helicopter parenting and attachment security to fathers were both significant. Controlling for child age and gender, children who perceived greater helicopter parenting by mothers reported higher anxiety especially when they perceived lower attachment to their father,  $\beta = .441$ ,  $SE = .119$ ,  $p < .001$  (adj  $R^2 = .127$ ). The results suggest the importance to consider the family relationships network to gain a more nuanced understanding of factors associated with child anxiety in pandemic times.

## CHARACTERISTICS OF REFLECTIVE FUNCTIONING AND EMOTION REGULATION IN MOTHERS OF CHILDREN DIAGNOSED WITH ADHD

*Caterina Buzzai (Università degli Studi di Enna 'Kore'), Carla Zappulla (Università degli Studi di Palermo), Alessia Passanisi (Facoltà di Scienze dell'Uomo e della Società, Università degli Studi di Enna 'Kore'), Ugo Pace (Università degli Studi di Enna 'Kore')*

This study aimed to investigate the characteristics of emotion regulation and reflective functioning in mothers of children diagnosed with ADHD. Moreover, attachment styles were investigated. Participants were comprised of 336 mothers, 168 with children diagnosed with ADHD and 168 with children without any diagnosis. Mothers of children with ADHD showed lower levels of reflective functioning and cognitive reappraisal than mothers of children without ADHD. Moreover, the comparison between the two groups showed that mothers of children with ADHD had lower levels of secure attachment. The mediation model tested for the group of mothers of children diagnosed with ADHD showed that the anxious and dismissing attachment styles were negatively related to reflective functioning, with cognitive reappraisal partially mediating this relationship. Theoretical and practical implications are provided.

## THE BEST TIME WITH MY MOM AND DAD: CHILDREN'S HAPPINESS FROM THE POINT OF VIEW OF THE CHILD, THE MOTHER, AND THE FATHER

*Flavia Izzo (Sapienza Università di Roma), Edoardo Saija (Sapienza Università di Roma), Jessica Pistella (Sapienza Università di Roma), Susanna Pallini (Università degli Studi Roma Tre), Roberto Baiocco (Sapienza Università di Roma)*

Although the literature on happiness has focused on adults and adolescents, research interest in subjective well-being in children has increasingly grown in recent years. The present study uses children's and parents' points of view to explore their perceptions of the best time spent together. Semi-structured interviews were carried out with 151 children (6-13 years old:  $M_{age}=8.71$ ,  $SD=2.01$ ; 42% males) and their mothers ( $M_{age}=42.23$ ,  $SD=5.10$ ) and fathers ( $M_{age}=45.47$ ,  $SD=5.48$ ). Using thematic analysis, the researchers identified three main themes: (1) emotional, physical, and material affectivity (i.e., cuddles and emotional care); (2) activities and behaviors (i.e., sports and outdoor activities); (3) denial and uncertainty (i.e., no specific memories). There was a significant parents' gender difference,  $\chi^2(6)=40.93$ ,  $p<0.001$ : The best time with the mother seems characterized by emotional, physical, and material affectivity (22%), while activities and behaviors are more frequent with the father (28%) regardless of children's gender. Health and social professionals may use the interview protocol to monitor and improve the children's subjective well-being and clinically assess the family's happiness. Implications for positive child development and clinical practice are discussed.

## THE ROLE OF AFFECTS AND EMOTIONAL STYLES IN THE RELATIONSHIP BETWEEN PARENTS AND PRESCHOOL CHILDREN

*Carolina Facci (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Andrea Baroncelli (Dipartimento di Filosofia, Scienze Sociali, Umane e della Formazione, Università degli Studi di Perugia), Enrica Ciucci (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

The emotions experienced by parents influence their parenting practices and emotional socialization style towards their children. This study aims to investigate the role of the feelings experienced in the parent-child relationships, considering the moderating role of the parental styles toward children's emotions. 136 mothers ( $M=38.09$  years,  $SD=4.51$  anni, 48.5% high school degree), with a preschool child (age range 3-5 years) in Central Italy, have filled out questionnaires that evaluate warmth and negative feelings experienced in the relationship with their children, the acceptance (Coaching) and the denial (Dismissing) of the emotional states showed toward children, and parenting practices. Multiple regression analyses, show that Warmth ( $\beta = .30$ ,  $p < .01$ ) and Negative Feelings ( $\beta = -.32$ ,  $p < .01$ ) are associated with Positive Parenting; however, the moderation effect of Dismissing Style on Warmth Feelings ( $\beta = -.25$ ,  $p < .01$ ) and on Negative Feelings ( $\beta = -.17$ ,  $p < .05$ ) emerged. Despite the limitations of this exploratory study, the results suggest the importance of considering the emotional dynamics of the parents towards their children, both in terms of affections and emotional styles, as they would seem to influence the parenting practices.

## MORAL AND SOCIAL DEVELOPMENT FROM ADOLESCENCE TO OLD AGE

*Proponente: Francesco Margoni (University of Oslo, Norway)*

This symposium consists of five contributions, each focusing on how a crucial aspect of morality or sociality undergoes significant changes in adolescence and adulthood. The first three contributions will show how moral judgment and prosocial decision making are shaped by age. The remaining two will focus on problems of great practical concern, such as bullying in adolescence. Elena Nava (Univ. of Milano-Bicocca) will open by presenting an investigation on intuitive cooperative decisions in incentivized economic games from adolescence to old age. Alessia Rosi (Univ. of Pavia) will present a research showing that prosociality increases with aging, but not in all domains. I will follow up by presenting an up-to-date processing model of moral judgment in old age. Gianluca Gini (Univ. of Padova) will illustrate the findings of a longitudinal research done to better understand how various cognitive and moral reasoning aspects of the adolescent are associated and can predict defending behavior in bullying. Lastly, Concetta Esposito (Univ. of Napoli) will present a research estimating the degree of congruency between parents' and children's evaluations of antisocial behavior characteristic of adolescence, and discuss how agreement has the potential to shape adolescents' own behavior.

## AGE-DEPENDENT CHANGES IN INTUITIVE COOPERATIVE BEHAVIOUR

*Elena Nava (Università degli Studi di Milano-Bicocca), Francesco Nava (London School of Economics, UK)*

Cooperation is one of the most advantageous strategies that have evolved to allow success in small and large-scale human societies, but incentivised economic games have revealed its flexible nature. Here, we investigate how cooperation and the mechanisms influencing it change across the lifespan, by assessing cooperative and altruistic choices from adolescence to older age (13-80 years), forcing participants to decide either quickly or slowly, and considering their social expectations, their general optimism, their desire to be socially accepted, and their attitudes toward risk. We find that faster decisions favour cooperation, but only from age 20, as adolescents are favoured by reflection in making cooperative decisions. Furthermore, our data reveal that participants' decisions are rooted in their expectations about other people's cooperative behaviour and influenced by individuals' level of optimistic perception about their own future, which increases with age. Moreover, contrary to cooperation, altruism is revealed to be an intuitive process from earlier on, with old individuals being the most generous. Thus, whereas we are instinctively generous since adolescence, a heuristic supporting cooperation emerges later in development.

## PROSOCIAL BEHAVIOR IN AGING: HOW PROSOCIALITY CHANGES FROM 20 TO 96 YEARS OLD IN DIFFERENT PROSOCIAL DOMAINS

*Alessia Rosi (Università di Pavia), Serena Lecce (Università di Pavia), Elena Cavallini (Università di Pavia)*

Prosocial behaviors tend to increase with age with older adults being more willing to donate money to a recipient in need compared to younger adults. While research conducted using monetary tasks is concordant in showing age differences, literature on the willingness to donate a nonmonetary resource reports mixed results. In the present study, we aimed to investigate in which domain -monetary vs. nonmonetary- older adults appear to be more willing to help another person in need. In addressing this issue, we considered the role of cognitive abilities and individual dispositions in explaining increases in prosociality. A total of 300 adults aged between 20 and 96 years old performed a task in which they had to decide how much to donate to the recipient in terms of money, physical energy, years of life, and social support. Results showed that, with increasing age, participants were willing to offer more money and social support to a recipient in need. No age differences emerged in the donation of energy and years of life. The older adults' increase in prosociality was explained by the higher level of empathic concern, particularly in the monetary domain. Overall, these results seem to suggest that older adults' prosociality depends on specific domains and individual dispositions.



## MORAL COGNITION IN OLD AGE

*Francesco Margoni (University of Oslo, Norway)*

Research suggests that moral judgment changes not only during childhood but also during adulthood. A key finding is that older adults tend to morally condemn accidentally harmful acts more than younger adults do, which overall suggests that whereas younger adults tend to weigh agents' intentions more than actions' outcomes, older adults tend to do the opposite, and weigh actions' outcomes more than agents' intentions. A set of studies my collaborators and I have conducted in recent years allow us to provide a detailed description of the process of moral judgment in old age. We have found that such age-related differences in moral evaluation are partly explained by older adults attributing more negligence (acting without due care) and intentionality to accidental transgressors. This increased attribution of negligence, in turn, has been found to be associated with a greater susceptibility to the hindsight bias in older adults. In sum, once older adults learn that an act caused an accident, they tend to perceive that the accident was more likely to happen than do younger adults, leading them to perceive the agent as more negligent and to condemn more their action. These findings further qualify the cognitive processes underpinning moral judgment in old age.

## LONGITUDINAL ASSOCIATIONS OF SOCIAL-COGNITIVE AND MORAL CORRELATES WITH DEFENDING IN BULLYING

*Gianluca Gini (Università degli Studi di Padova), Tiziana Pozzoli (Università degli Studi di Padova)*

Defending in bullying is a complex, yet important behavior that is likely associated with individual characteristics and group factors that operate simultaneously in the classroom microsystem. However, little research has longitudinally analyzed the role of multiple promoting factors at both the individual and classroom level. Drawing on the social-ecological theory and social-cognitive theory, the present study examined the prospective associations between Fall defending self-efficacy, moral disengagement, moral identity, and moral distress and Spring defending behavior. Participants were 1163 adolescents (48.7% females; Mage = 13.6, SD = 1.1) attending 67 classrooms in Italian public schools. Defending showed moderate stability over one school year. At the individual level, multilevel analyses showed that T1 self-efficacy for all students, and moral distress for male students, positively predicted T2 defending. Moreover, high moral disengagement negatively predicted T2 defending only when students also reported high levels of moral identity. At the class-level, T1 class defending and class moral identity explained between-class variability in T2 defending. The findings have multiple implications for interventions that aim to increase defending behavior.

## ANTISOCIAL BEHAVIOR EVALUATION IN ADOLESCENCE: ANALYZING PARENT-CHILD DYADIC CONGRUENCE

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How adolescents evaluate the wrongness of antisocial behaviors (ABs) plays a key role in the development of antisocial tendencies (Dodge et al., 2006). According to Grusec and Goodnow (1994), the internalization of social-cognitive patterns underlying AB is strongly influenced by parents. Using Latent Congruence Models (LCM), this study analyzed the dyadic congruence between adolescents and their parents in evaluating the wrongness of ABs within the moral, conventional and prudential social domains. The study involved 385 triads consisting of mother, father, and child (Mean age = 13.70, SD = 1.62). Participants completed the Antisocial Behavior Evaluation Questionnaire (Esposito et al., 2020), including 21 items describing ABs in multiple domains. The LCMs showed good fit indices. A significant lack of congruence in mother-child and father-child dyads across all domains was observed, with parents evaluating ABs more wrong than adolescents. Lack of congruence was greater for conventional violations. The results highlight the importance of investigating parent-child congruence in AB evaluations from a dyadic perspective, thus opening new directions for research on the factors that can contribute to parent-child dissimilarity and its associations with adolescent behavioral outcomes.

## **SCHOOLS AS POSITIVE CONTEXTS FOR LEARNING, SOCIO-EMOTIONAL DEVELOPMENT AND WELL-BEING: THE IMPACT OF TEACHERS' MENTALIZING COMPETENCE AND OF QUALITY OF TEACHER-STUDENT RELATIONSHIP**

*Proponenti: Federica Bianco (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Ilaria Castelli (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

The current symposium focuses on the figure of the teacher as educational caregiver, playing a central role in scaffolding learning, socio-emotional development and wellbeing within his/her classroom (Pianta, 2001). The work by Bianco and colleagues is centered around the interplay between teachers' mentalizing ability and the existence of a good school climate. The second work by Valle and collaborators shows that the mentalizing ability of children aged 8 and 10 depends upon the teacher's mentalizing skills and on the quality of teacher-child relationship. The contribute by Sette and Baumgartner underlines the protective role for psychological wellbeing of the quality of teacher-student relationship in contrasting the negative effects of peer victimization, in students aged 8-14 years. The study by Vettori and Bigozzi shows that academic learning in early adolescents is influenced by the representation that they have of the student-teachers' relationships. On the whole, the symposium provides inspiration for applicative work focused on the support of positive school contexts, starting from the important role that teachers have as educational caregivers.

## THE IMPACT OF TEACHER'S MENTALIZING COMPETENCE ON THE PERCEPTION OF SCHOOL CLIMATE

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School climate (i.e., perceptions of the quality of school life relating to values, relations, and learning practices) influences academic achievement, teachers' working conditions and individual's wellbeing. The current study aims at understanding if teachers' mentalizing ability affects their perception of school climate. To this aim, 397 teachers (52 male, age-range 22-68,  $M = 46.12$ ,  $SD = 10.39$ ; 45,1% Elementary school and 54,9% Junior High school; Myears of experience = 16.05;  $SD = 11.8$ ) completed an on-line survey. In a hierarchical regression analysis, at Step 1 we entered age, gender, years of experience, and educational level, at Step 2 life satisfaction, and at Step 3 mentalizing ability. Step 1 and 2 were significant,  $F_s \geq 8.67$ ,  $p < .001$ . Interestingly, Step 3 led to a significant increase in the variance explained,  $F(1, 390) = 7.96$ ,  $p = .005$ , with mentalizing skills uniquely predicting 13.5% of variance in perception of the school climate. Mentalizing skills also predicted job satisfaction,  $F = 4.99$ ,  $p < .001$ . Our results help to understand predictors of positive school climate at the level of the socio-emotional competence of the teacher.

## PEER VICTIMIZATION AND INTERNALIZING PROBLEMS: THE ROLE OF TEACHER-CHILD RELATIONSHIP QUALITY IN PRIMARY SCHOOL CHILDREN

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Peer victimization (i.e., the exposure to peer aggression) is associated with the development of internalizing problems (Reijntjes et al., 2010). A close teacher-child relationship may benefit children's socio-emotional well-being, whereas a conflictive teacher-child relationship may be a risk factor (Sabol & Pianta, 2012). This study investigated the role of the teacher-child relationship in the link between peer victimization and internalizing problems. Participants were 216 children (118 girls) aged 8-14 years ( $M_{age}=11.07, SD=1.62$ ). Children completed a questionnaire to assess peer victimization (Ladd & Kochenderfer-Ladd, 2002;  $\alpha=.73$ ), teacher-child relationship (Koomen & Jellesma, 2015; closeness  $\alpha=.89$ , conflict  $\alpha=.73$ ), social anxiety (La Greca & Stone, 1993;  $\alpha=.92$ ), depression (Kovacs, 2003;  $\alpha=.88$ ), and loneliness (Asher & Wheeler, 1985;  $\alpha=.78$ ). Findings from regression analyses revealed interaction terms between peer victimization and teacher-child conflict in the association with depression and loneliness. At higher levels of conflict, peer victimization was related to depression ( $b=.18, p=.001$ ) and loneliness ( $b=.59, p<.001$ ), while at lower levels of conflict, peer victimization was not related to depression ( $b=.01, p=.90$ ) and loneliness ( $b=.11, p=.42$ ). The implications and future directions are discussed.

## MENTALIZATION AND ATTACHMENT IN EDUCATIONAL RELATIONSHIPS AT PRIMARY SCHOOL

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Mentalization is a key social ability that develops from infancy to adulthood, starting from early familiar attachment relationships and developing in extra-familiar contexts, such as the school. Although the amount of research on the links between mentalization and attachment has been increasing, there is still little evidence on the teacher-child relationship in this perspective. This study aims to investigate the effects of teachers' mentalization (mind-mindedness and mentalized affectivity) and of pupils' representation of the educational attachment relationship on the mentalization of two groups of children aged 8 (Group 1) and 10 (Group 2). The results for the Group 1 show that the teacher's tendency to describe a pupil through physical comments impacts children's mentalization ( $F= 10,61$ ,  $p<0,01$ ,  $R^2 \text{ Adj} =0,286$ ); for the Group 2, teacher's mentalized affectivity, specifically the ability to use autobiographical memory to interpret the present emotional experience, has a role in children mentalization ( $F= 8,45$ ,  $p<0,005$ ,  $R^2 \text{ Adj} =0,415$ ). The results highlight the important role of the teacher in the construction of a class climate that supports pupils' mentalization, with significant differences based on the duration of the teacher-pupil relationship.

## STUDENT-TEACHERS' RELATIONSHIPS FROM THE STUDENTS' POINT OF VIEW AND THE ASSOCIATION WITH SCHOOL ACHIEVEMENT

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Student-teachers' relationships exert an important influence on school learning and well-being. This study adopted a person-oriented approach to investigate early adolescents' conceptions of student-teachers' relationships and the associations with school achievement. Two thousand and forty-four students filled a self-report questionnaire to explore cognitive, metacognitive, and affective aspects of early adolescents' conceptions of student-teachers' relationships. Also, students' school achievements were collected. The results of cluster analyses and one-way MANOVA showed two profiles of early adolescents' conceptions of student-teachers' relationships. Chi-square tests showed that the two profiles were differently associated with school achievement: students with a vision of a passive-receptive relationship with teachers showed low school achievement across school subjects, meanwhile students with a vision of student-teacher's relationships characterised by constructive and participative approach showed excellent school achievement. The results will be discussed in light of practical implications and interventions.



# **ATYPICAL DEVELOPMENT: RECENT INSIGHT ON ASD**

## SEXUALITY IN AUTISTIC ADOLESCENTS AND YOUNG PEOPLE: A SYSTEMATIC REVIEW

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The purpose of the study was to describe the literature on sexuality in 9-30-year-old people with Autism Spectrum Disorder (ASD). To our knowledge, no similar systematic reviews have been run yet, that is the reason why we decided to systematize the literature on this topic. We ran a Systematic Review using the PRISMA-P guidelines, by consulting PsycInfo and PsycArticle databases. The first analysis was conducted in April 2021 and generated 96 articles; 26 studies were included. Results indicate that youth with ASD have a physical and sexual maturation similar to that of typical populations. Furthermore, they show interest in relationships and engage in sexuality-related behaviors. However, the specificities associated with ASDs may generate difficulties in coping with puberty-induced changes. Studies also show that individuals with ASD receive less sex education and have less knowledge related to sexuality than typically-developing peers, exposing them at greater risks of developing inappropriate sexual behavior. To address the need for specialized sexual education programs, future research should examine specific issues faced by individuals with ASD as they enter adolescence and adulthood, to identify areas to consider when implementing tailored interventions.

## SOCIAL PERCEPTION, SOCIAL KNOWLEDGE AND SOCIAL PERFORMANCE IN CHILDREN AND ADOLESCENTS WITH ADHD AND AUTISM WITHOUT INTELLECTUAL DISABILITIES

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Social functioning mainly involves three components: (a) social perception (the representation and interpretation of social cues) (b) social performance (performing the appropriate social action in response to a stimulus) and (c) social knowledge (understanding the most appropriate response in a particular situation). Differences among these three components are still poorly explored, in ADHD population and Autism Spectrum Disorder without intellectual disabilities (ASD). In the present study we examined social perception, social performance and social knowledge in children with ADHD (N=60) compared to children with ASD (N=51) and typically-developing children (TD, N=108). Three videos of problematic interactions among peers were shown and a semistructured interview was proposed to assess each social functioning's component. Data were analyzed with one-way ANOVAs and multinomial mixed effects models. There was evidence of social perception impairment in both clinical groups, compared to TD. Differently, some specificity emerged in the other two components: children with ADHD performed less well than ASD and TD in social performance, whereas children with ASD had significant impairment in social knowledge, compared to ADHD and TD. Clinical implications are discussed.

## HEALTH AND NO-HEALTH PROFESSIONALS' KNOWLEDGE OF AUTISM SPECTRUM DISORDER (ASD): AN EXPLORATORY STUDY IN ITALY

*Annalisa Levante (Università del Salento), Chiara Martis (Università del Salento), Martina Gemma (Università del Salento)*

Despite the growing understanding of Autism (ASD), there is a lack of its knowledge among professionals (Harrison et al., 2016). Only one study explored the ASD knowledge in Italy revealing the need for more educational awareness. This exploratory study aims at investigating the ASD knowledge among health (pediatricians, psychologists) and no-health (nursery teachers) professionals. 156 health and 197 no-health professionals filled out the Knowledge about Childhood Autism (Stone and Rosenbaum, 1988): the questionnaire consists of 4-domain: social interaction (D1), in communication/language (D2), repetitive behaviors (D3), and comorbidities/onset of ASD (D4). We considered 60% correct answers to be indicative of basic knowledge. Both groups exceed the 60% of correct answer: health professionals [D1:M(sd)=6.44(1.46); D2:M(sd)=.71(.46); D3:M(sd)= 3.13(.6); D4:M(sd)=4.73(1.06)] reached higher scores than no-health [D1:M(sd)=6.02(1.7); D2:M(sd)=.61(.49); D3:M(sd)= 2.86(.66); D4:M(sd)=3.73(1.3)]. The comparative analysis revealed a difference in D1, D3, and D4 between groups. Both groups showed basic knowledge of ASD. Nevertheless, more education for no-health professionals were required to detect children at risk in preschool settings exhorting family to have an early evaluation.

## THE ROLE OF AGENCY AND REWARD IN MODULATING FREE CHOICES OF CHILDREN WITH ASD OR TYPICAL DEVELOPMENT

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Agency comes from being able to perform voluntary actions and choices, and perceive their effects as self-paced. We are motivated by this control over the environment, regardless of whether the action consequences are positive per se. This makes us capable of trying new things, with uncertain or potentially risky outcomes. Children with Autism Spectrum Disorder (ASD) manifest restricted and repetitive behaviours, which might be associated with atypical sensitivity to agency and increased search for positive rewards. We aimed at disentangling the role of agency and reward in driving choices of children with ASD or typical development, who were asked to freely select one of three candies and feed the animals appearing on a tablet. The candies were associated with different probabilities of delivering a neutral vs no effect (Agency task), or a positive vs neutral effect (Reward task). In addition to what options the children chose, reaction times give us a measure of how much planning was required to make each choice. The results will be discussed with a focus on the potential clinical implications.

# **PSYCHOLOGY AT SCHOOL: STUDENTS' PERSPECTIVES**

## TEACHING CLINICAL REASONING TO PSYCHOLOGY STUDENTS: AN EXPLORATORY STUDY ON THE POTENTIAL OF A PODCAST TRAINING

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Clinical reasoning is a construct shared by all health professions, which, starting from a problem or a series of symptoms, through the recounting of useful information, arrive at a diagnostic and treatment hypothesis. This paper aims to reflect on the possibility of including the teaching of clinical reasoning within the curricula of psychologists in training, even more so in light of the approval of the law on qualifying degrees. A quasi-experiment was conducted between a group of psychology students exposed to clinical reasoning through a podcast training and another group of students who used a more traditional methodology of studying a script. The findings revealed an improvement in the acquisition of clinical reasoning by the group of students exposed to podcast training in contrast to their colleagues who had studied written materials. The clinical reasoning assessment tool developed in the study could become a very functional tool for assessing the improvement of this skill in future clinical psychologists, even with the benefit of more sophisticated virtual reality technologies for the design of podcasts that would allow for a more immersive and realistic experience.

## PRESCHOOL TEACHERS' SELF-EFFICACY REGARDING OBSERVATIONAL METHODS: HOW DOES IT VARY ACROSS CHILDREN'S DEVELOPMENTAL DOMAINS AND TEACHERS' LEVELS OF WORKING EXPERIENCE?

*Paula Doege (Libera Università di Bolzano)*

Preschool teachers play a crucial role in the management of pedagogical environments that promote child development and learning. Using observational methods to assess each child's development and learning is commonly shared practice. However, little is known about teachers' self-efficacy (Bandura, 1994) regarding observational methods, especially across specific developmental or learning domains. Since self-efficacy is not a stable construct but may change due to professional experience, the present study includes two groups: pre-service as well as in-service teachers. Participants completed an online survey on their general self-efficacy regarding the pedagogical diagnostic process as a main component of their professional tasks. Furthermore, their domain-specific self-efficacy beliefs were assessed. The presentation will give first insights in preschool teachers' self-efficacy beliefs regarding observational methods and their relation to their level of working experience. As observational methods constitute a fundamental competence for preschool teachers and self-efficacy beliefs are a central determinant of their professional performance, the implications for preschool teachers' education as well as continuous professional development will be discussed.



## SCHOOL PSYCHOLOGISTS IN ITALY: CHARACTERISTICS, TRAINING, PRACTICES, AND CHALLENGES

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School psychology around the world has expanded considerably over the years. However, there is little recent evidence on its condition in Italy. We therefore carried out an exploratory study based on semi-structured interviews to investigate characteristics of Italian school psychologists, the services they deliver in schools, and internal and external challenges to the development of the profession. The study was supported by an international research grant from the Society for the Study of School Psychology (SSSP). A total of 33 key informants (i.e., representatives of Regional Boards, stakeholders, policymakers, and experienced school psychologists) took part in semi-structured interviews. The interview protocol included questions related to five main areas: role and functions of school psychologists, features of the services delivered, main challenges and main opportunities related to the profession, and future steps to strengthen school psychology in Italy. Preliminary findings reveal school psychologists' actual and desired characteristics and service-delivery model, challenges, and opportunities to strengthen the profession. Implications for the development of school psychology in Italy and suggestions for future research will be discussed.

## AN OVERVIEW OF REVIEWS RELATING SCHOOL REINTEGRATION PROGRAMS AND INTERVENTIONS FOR STUDENTS WITH MEDICAL CONDITIONS HOSPITALIZED FOR LONG PERIODS

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Hospitalization during childhood and adolescence can favor a greater probability of school dropout and relational difficulties, such as social isolation or bullying. A particularly difficult transition for children with medical conditions hospitalized for long periods is returning school after recovery. With this overview of reviews researchers wanted to better understand school reintegration programs for hospitalized children and offer practical ideas for school staff and family to favor a successful return to school. The overview shows that it is important to improve comprehensive school reintegration programs, such as interventions for students with medical conditions, classmates, traditional school, hospital, and family. The overview of reviews emphasizes the relevance of including school psychologists in reintegration programs to school to help children, schools and families. In the future it is important to imagine and plan school reintegration programs that consider all the aspects involved in the transition from the hospital to the traditional school.

# **PSYCHOLOGY OF ADOLESCENCE: EXPLORING EMOTIONS AND WELL-BEING**

## ADOLESCENTS' DEVELOPMENT: THE IMPACT OF PRO-ENVIRONMENTAL BEHAVIORS ON THEIR WELL-BEING

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During adolescence social responsibility increases and this finds expression in a growing concern for and interest in society and one's own community through behaviors that can promote personal and social well-being. Interest in one's own community can translate into pro-environmental behaviors that contribute to adolescents' well-being, as they feel that they are caring for people or their local area. Improving the context in which one lives through simple pro-environmental behaviors promotes place attachment and can have a positive impact on adolescents' well-being. The aim of this study is to investigate the impact of pro-environmental behavior on place attachment and adolescents' well-being. The results show a direct association between pro-environmental behaviors and place attachment,  $\beta = .16$ ,  $p < .001$  and in turn with personal,  $\beta = .32$ ,  $p < .001$ , and social,  $\beta = .31$ ,  $p < .001$  well-being. We also found a direct association between pro-environmental behaviors and personal,  $\beta = .19$ ,  $p < .001$ , and social,  $\beta = .14$ ,  $p < .001$  well-being. Therefore, place attachment partially mediated the hypothesized relationships,  $\beta = .05$ ,  $p < .001$ . Implementing pro-environmental behaviors produce benefits not only for the community but also for those who implement them enjoying higher levels of well-being.

## EXPLORING THE RELATIONSHIP BETWEEN BODY SATISFACTION, SELF-COMPASSION AND DYMORPHISM AMONG ITALIAN ADOLESCENTS

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Several studies showed the strong association between body satisfaction and dymorphism. More recently authors also started to investigate the role of self-compassion, that is the act of being kind and understanding towards oneself in moments of distress. To date, there are no studies on this topic in Italy. The study aimed at investigating: the associations between these variables and the moderating role of one component of self-compassion (i.e self-judgment) on the relationship between body satisfaction and dymorphism. Participants were 94 Italian adolescents (M age=14.47), who completed an online survey on body self-esteem, dymorphism and self-compassion. Preliminarily, several significant and strong correlations emerged between body satisfaction, dymorphism and self-compassion. For the second aim, a hierarchical multiple regression model was computed. The model showed that body satisfaction ( $\beta=-.785$   $p<.001$ ) significantly explained dymorphism. A significant interaction effect was found ( $\beta=-.216$   $p<.001$ ) showing the moderating role of self-judgment ( $F= 81.672$ ,  $p<.001$ ,  $R^2=73\%$ ). Results highlight the importance of considering the attitude towards oneself in understanding dymorphism among adolescents and suggest interesting cues for interventions and clinical practice.

## PANDHEMOT: AN EVIDENCE-BASED TRAINING TO INCREASE CHILDREN AND ADOLESCENTS' KNOWLEDGE ON PANDEMICS AND EMOTIONS

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Preventing the negative effects of pandemics on children and adolescents' mental health is pivotal. This can be done promoting their emotional competence, i.e., the ability to express, understand, and regulate emotions (Denham, 1998). Therefore, we tested the PandHEMOT (Pandemics – Helmet for EMOTions) training, aimed at increasing children and adolescents' knowledge on pandemics, emotions, and emotion regulation strategies. The sample involved 147 third (Mage = 8.35, SD = 0.28) and seventh-graders (Mage = 12.40, SD = 0.30), divided into an experimental and a control group. Students from the experimental group participated to a 3-unit training using the PandHEMOT app with tablets and headphones. All the students filled in questionnaires about their knowledge in pre and post-training phases. Through Generalized/Linear Mixed Models, we found significant Group x Phase interactions. The findings indicated that participating to the training increased knowledge on: pandemics, protective measures, facial expression, emotional lexicon, and emotion regulation strategies. Moreover, wellbeing did not decrease after the training. This study supported the efficacy of the PandHEMOT training in fostering children and adolescents' resilience, following the evidence-based research standards.

## SELF-CONTROL, PARENTAL INVOLVEMENT, INTERNALIZING PROBLEMS, AND PROSOCIALITY: ASSOCIATIONS, STABILITY, AND CHANGES DURING ADOLESCENCE IN A RISK AND RESILIENCE PERSPECTIVE

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Studying the associations of self-control and parental involvement with prosociality and internalizing problems (anxiety and depression) from early to late adolescence could help researchers better understand how youth function. However, longitudinal research in this field is limited. This study longitudinally explored these constructs and their relations among 1446 youth, followed from age 11 to age 17. The four constructs were measured through specific self-report measures (Longshore et al. 1996; Murray et al., 2019; Shelton et al., 1996). Latent growth curve (LGC) modeling analyses using Mplus 7 were applied. The results suggested that self-control, parental involvement and prosociality decrease over time, while internalizing problems increase. However, greater levels of self-control and parental involvement in early adolescence seemed to act as “slowing” factors of these development patterns, with a lower increase in internalizing problems and lower decrease in prosociality in the later years. These findings suggest that early adolescence may represent a turning point in terms of sociopsychological functioning in later adolescent periods, as a function of both individual and familial variables.

# **ATTACHMENT STYLES AND PSYCHOLOGICAL WELL-BEING**



## PARENTAL STYLES AND ATTACHMENT EXPERIENCES: WHAT OUTCOMES ON THE DEVELOPMENT OF EMOTIONAL AND MORAL SKILLS

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In educational styles and attachment experiences research, little attention has been paid to the dimensions of moral development and how the latter can be interconnected with emotional self-regulation skills. It is therefore interesting to explore the relationship between parenting styles, internal working models of attachment and the development of moral and emotional skills. The study involved 307 young people (aged 19-25 years) and the dimensions explored were: parental styles (measured with PSDQ: Tagliabue et al., 2014; MOPS: Picardi et al., 2013); attachment styles (ECR: Picardi et al., 2002); moral disengagement (MDS: Caprara et al., 2006) and emotional skills (TAS-20: Bressi et al., 1996; DERS: Sighinolfi et al., 2010). By comparing parenting styles those who described their parents as authoritative compared to authoritarian and permissive styles, show less alexithymia ( $p < .01$ ), less emotional dysregulation ( $p < .001$ ), less use of moral disengagement mechanisms ( $p < .01$ ). With respect to attachment style, they reveal less anxiety ( $p < .01$ ) and less avoidance ( $p < .05$ ). Moreover, a significant correlation emerges between moral disengagement mechanisms and respectively emotional dysregulation ( $p < .01$ ) and alexithymia ( $p < .001$ ).

## ATTACHMENT SECURITY AND EMOTION REGULATION FROM INFANCY TO ADOLESCENCE: THE UNIQUE ROLE OF THE FATHER

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The association between parental attachment and children emotion regulation (ER) plays an extensive role in the whole life cycle, with special influence up to adolescence. To analyze this association, research mainly focused, so far, on maternal attachment, with a scant consideration of fathers. Aim of the present systematic review is to describe whether and how paternal attachment differs from maternal attachment in the development and use of ER. The PRISMA protocol was implemented by imputing “attachment”, “father/paternal” and “emotion regulation” as keywords for the research. The following database were consulted: Web of Science, Scopus, PubMed, PsycINFO, Psychology and Behavioral Science Collection, targeting peer-reviewed studies produced in the year span 2000-2022 with samples aged from 1 to 19 years. Out of 1055 collected studies, 20 papers were selected by two independent judges with an inter-rater reliability of 86%. Results highlighted that paternal and maternal attachment carry out a mostly comparable function in promoting ER, although the first one seems to gain a specific and greater relevance with the children’s approach to adolescence, especially in the management of negative emotions. The developmental implications of the obtained results will be discussed.

## THE LONGITUDINAL RELATIONS BETWEEN SELF-ESTEEM AND SOCIAL SUPPORT FROM PARENTS AND ROMANTIC PARTNER: A 7-WAVE RANDOM INTERCEPT CROSS LAGGED PANEL STUDY ON LATE ADOLESCENTS

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The study focused on the longitudinal relationships between self-esteem and perceived social support from parents and romantic partners during late adolescence and young adulthood. The aim was to test different theoretical models explaining the association among variables. Participants were 5779 late adolescents (M age at T1 = 16.89, SD = .69, 44.4% males) and data came from seven waves between 2001 to 2007. A random intercept cross-lagged panel model was applied to investigate the within-person and between-person effects. Self-esteem and parental support both increased over time. Significant within-subject effects were found for partner's support over time. Cross-lagged effects showed that self-esteem and parental support were positively related to each other during the first waves while self-esteem and partner's support were positively related to each other in the last waves. Negative relationships have been found between parental and partner's support over the first three waves and positive over the final four waves. These results provided support for a bidirectional effect between self-esteem and social support. Second, the evidence supported the principle that perceived parental support is crucial in the first years of the study whereas the partner's one in the last waves

## ATTACHMENT STYLES AND PSYCHOLOGICAL WELL-BEING IN YOUTHS AND ADULTS WITH STABLE CLOSE RELATIONSHIPS

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The present study aimed to explore the associations between adult attachment styles and psychological well-being controlling for age and close relationships. Method: A sample of 393 Italian youths and adults, from 18 to 62 years-old, consists of individuals with stable close relationships (n=219) and single individuals (n=174). We used the Psychological well-being scales (Zani & Cicognani, 1999) to measure the psychological well-being; the Attachment Style Questionnaire (Fossati et al., 2003) to analyze the type of adult attachment relationships; the State Adult Attachment Measure (Trentini et al., 2015) to assess the individual experiences of attachment based on security, anxiety, and avoidance. Results indicate that individuals with stable close relationships score higher in well-being and report an attachment style linked to security more than the singles; further, the singles display an attachment style linked to discomfort with closeness, re-relationships as secondary, and avoidance more than individuals with stable close relationships. Conclusions: The role of close relationships can be considered a protective factor for psychological well-being and emotional strength in adult attachment styles during the life span.

# **THE PSYCHOLOGICAL IMPACT OF THE COVID-19 PANDEMIC**

## “HELICOPTER-PARENTING” DURING THE COVID-19 PANDEMIC? EXPLORING THE ASSOCIATION BETWEEN MATERNAL ANXIETY CHILDREN’S STRESS

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Maternal anxiety is identified as one of the most relevant predictors of children’s mental health (Al-Turkait & Ohaeri, 2008). Often linked to parental anxiety, “helicopter parenting” describes parents’ tendency to hover over their offspring (Cline & Fay, 1990), which can negatively impact the children (Hudson & Rapee, 2004). During the COVID-19 pandemic, children and their parents were isolated together, with stressful changes in their routine and social infrastructure that highly impacted adults and, (also) in turn, children (Wang et al. 2020). Moving from the assumption that, during the pandemic, mothers developed over-protective attitudes to secure their children, we investigated the relationship between mothers’ anxiety and children’s (self-reported) stress in a sample of 414 primary school children (229 females, Mage = 9.44) and 395 mothers (Mage = 42.87). Specifically, we tested whether the relationship between mothers’ anxiety and children’s stress was stronger when perceived parental support was high, to provide evidence for the “helicopter-parent effect” during the COVID-19 pandemic. The moderation analysis supported the predictions: mothers’ anxiety was positively associated with children’s stress only when perceived parental support was high.

## THE IMPACT OF COVID-19 PANDEMIC ON ADOLESCENTS' EMOTIONAL STATES DURING THE FIRST AND THE SECOND LOCKDOWN IN ITALY: THE MEDIATION OF HOPELESSNESS

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Due to the impact of COVID-19 pandemic on their daily life, adolescents experienced mood fluctuations toward heightened negative affect and dampened positive affect. Moreover, the uncertainty and low predictability characterizing the pandemic were likely to promote pessimistic life expectations for the future. Such negative cognitive style takes the form of hopelessness and represents a key vulnerability factor for feeling negative emotional states. Guided by the hopelessness theory, we investigated whether the impact of pandemic on adolescents' daily life during the first lockdown promoted an increase of negative and a decrease of positive affects at the time of the second lockdown and if such relations were mediated by hopelessness. A sample of 556 adolescents (38.3% males;  $M_{age} = 15.87$ ,  $SD = 1.39$ ) self-reporting during the first (April-May 2020) and the second (March 2021) lockdown in Italy. Structural equation modeling revealed that the more youth perceived a negative impact of pandemic during the first lockdown, the more their positive affects decrease and negative affects increase during the second lockdown through the mediation of hopelessness. These findings provide some suggestions to prevent the negative effects of pandemic on emotional well-being in the long term.

## THE PSYCHOLOGICAL IMPACT OF THE COVID-19 PANDEMIC ON ITALIAN PSYCHOLOGY AND HEALTHCARE STUDENTS: PSYCHOLOGICAL WELL-BEING, OPINIONS ON PRACTICAL TRAINING AND ONLINE LEARNING, AND FUTURE PERSPECTIVES

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This study explored the impact of COVID-19 containment measures on practical training and psychological well-being of Italian psychology and healthcare students during the first and second wave of pandemics. A total of 655 students, 298 of which attending psychology or other healthcare courses, completed a battery of standardized questionnaires during the first COVID-19 wave. After one year, 576 students with 262 healthcare students, completed the same battery. The questionnaires explored students' opinions on the quality of practical training and online learning and the psychological impact of the pandemics. During the first lockdown, healthcare students reported higher negative emotions than other students, with a more significant increase in the negative emotions score after one year. Regarding online training, psychology and healthcare students reported more significant difficulties in study organization and greater concerns about the pandemic harms on practical training. Overall, healthcare students rated online education more negatively than the other students. These results confirm the need of improving the practical training quality of healthcare students after pandemic and the importance of promoting adequate psychological empowerment strategies for these students.



## MORAL DISENGAGEMENT, CONSPIRACY BELIEFS AND REGULATORY SELF-EFFICACY DURING COVID-19: A MEDIATION MODEL AMONG EARLY AND YOUNG ADULTS

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Previous studies on moral disengagement (MD) showed that early adults are more likely to disengage than older adults because, starting from an early age, individuals who morally disengage may perceive some transgressive behavior as reasonable, at least under some circumstances. However, little is known about the mediating role of MD in the relationship between regulatory self-efficacy (RESE), beliefs in conspiracy theories (B\_CT) and compliance with COVID-19 health-related behaviors (CO\_HB). A total of 1164 young adults (women, 68.4%; Mage  $25.60 \pm 4.40$  years) completed an online survey (May - June 2021). They were divided into two age groups: early (18-25) and young (25-35) adults. Results of the multigroup path analyses indicated that, both for early and young adults, higher RESE were associated with higher compliance with CO\_HB, whereas higher MD was associated with lower compliance with CO\_HB. MD fully mediated the association between B\_CT and CO\_HB and partially mediated the association between RESE and CO\_HB. Findings suggest the importance to promote interventions aimed at improving regulatory self-efficacy, emphasizing the moral significance of respecting the recommended COVID-19 measures and enhancing people's concern for the potential harms of their immoral acts.

# THEORY OF MIND

## SYNCHRONY DURING ONLINE ENCOUNTERS AFFECTS SOCIAL AFFILIATION AND THEORY OF MIND BUT NOT EMPATHY

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Synchrony affects social affiliation and cognition. However, it is unclear whether these effects hold for online video meetings and to whether they extend to empathy and theory of mind (ToM). 126 young adults met online in unacquainted pairs. Participants either performed synchronous, asynchronous movements or a small talk condition. In a subsequent empathy task, participants talked about personal life events. The conversation was recorded and played back, and each participant rated, at predetermined time points, how they themselves and their partner felt. From this we calculated empathic accuracy (accuracy of the estimation of the other's emotion) and emotional congruence (emotion sharing). ToM was measured by asking participants to report what happened in videos of triangles interacting measuring the amount of intentionality in the answers. Participants in the synchrony condition rated greater closeness and similarity relative to the asynchrony one. The synchrony group tended to ascribe more intentionality than the asynchrony one, suggesting greater ToM. Synchrony and asynchrony groups did not differ in empathic indices. These results highlight the potential of synchrony in online contexts, such as education and social meetings, to affect social cognition and affiliation.

## DOES PERFECTIONISM ALWAYS MAKE YOU FEEL BAD? ASSOCIATIONS WITH PSYCHOLOGICAL WELL-BEING AND SELF- COMPASSION

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Study explores as different dimensions of perfectionism influence psychological well-being (PWB) in emerging adults. Literature deepened the relationships between maladaptive perfectionism (e.g., excessive self-criticism, perceived discrepancy from standards) and low PWB. Instead, less is known about whether and how adaptive perfectionism (e.g., pursuing personal standards) relates with PWB. Secondly, we investigated whether self-compassion (i.e., self-benevolence, seeing personal imperfections as common condition) may mediate the relationships between perfectionism and PWB. Participants (N=217, 18-35 y.o.) completed online questionnaires measuring: perfectionism dimensions (high standards, order, and discrepancy), PWB, and self-compassion (SCS). Perfectionism discrepancy resulted the most robust predictor of low PWB ( $\beta=-.68$ ), followed by high standards with a positive direction ( $\beta=.23$ ;  $R^2=.514$ ,  $p<.001$ ). High standards did not correlate with SCS, whereas a strong negative association emerged between discrepancy and SCS ( $r=-.67$ ,  $p<.001$ ). A mediation analyses revealed that self-compassion is a buffer factor between discrepancy and low PWB. Results suggest focusing on self-compassion for reducing the negative impact of maladaptive perfectionism on healthy psychological functioning.

## CAN A ROBOT LIE? THE ROLE OF INTENTIONALITY UNDERSTANDING AND FALSE BELIEF IN CHILDREN AGED 5 AND 6 YEARS

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Recently, social robots have been increasingly included in various contexts, such as educational settings. The inclusion of robots in children's lives calls for reflection on the psychological and moral aspects of such relationships, especially with respect to children's ability to differentiate intentional from unintentional false statements, i.e., lies from mistakes—an important component of children's developing Theory of Mind (ToM). The present research explored the ability of age 5 and 6 children to identify and morally evaluate lies and mistakes produced by a human compared to NAO robot. Children observed videos in which different agents made intentionally or unintentionally false statements. Irrespective of the agent, children found mistakes more difficult to understand than lies. Yet children were disinclined to attribute a lie to the robot. Children's age, their understanding of intentionality, and ToM were the strongest predictors of their performance on the lie-mistake task. Conversely, there wasn't connection to executive functions. Our findings suggest that, regardless of age, a robot is perceived as an intentional agent. Robot behaviour was more acceptable for children because his actions could be attributed to someone who programmed it to act in a specific way.

## EXAMINING THE COGNITIVE CORRELATES OF ADULTS' INDIVIDUAL DIFFERENCES IN THEORY OF MIND: THE CASE OF FALSE MEMORIES

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Recent developmental studies have shown the existence of meaningful individual differences in theory of mind (ToM) across lifespan. Research has also shown that individual differences in ToM are related to memory. For example, children in the autism spectrum disorder (ASD) who show impairments in ToM are also characterized by a difficulty in extracting global information and are less likely to produce false memories. We examined, on a sample of 103 healthy adults, the link between false memories (using the DRM task) and two components of ToM: one requiring mental states' recognition on the basis of eye gaze cues (Reading Mind in the Eyes; RMET), and the other requiring the ability to integrate inferred mental states into a global representation to make sense of a presented scenario (the Triangles task). Results showed that, controlling for vocabulary, semantic performance was significantly related with that in the Triangles, but not the RMET task. Specifically, the higher participants' ToM, the higher their reliance on semantic memory while making false memories in the DRM task. Our findings are consistent with seminal theories, such as the Weak Central Coherence, and suggest that individual differences in ToM are relevant not only in the social but also in the cognitive domain.

# DEVELOPMENTAL DISORDERS

## NONVERBAL LEARNING DISABILITY AND DEVELOPMENTAL COORDINATION DISORDER: OVERLAPS AND DIFFERENCES IN VISUOSPATIAL AND MOTOR ABILITIES

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Children with Nonverbal Learning Disability (NLD) and Developmental Coordination Disorder (DCD) present some similar features, challenging their differential diagnosis. Despite this, to our knowledge, no studies have directly compared these two clinical profiles considering their visuospatial and motor abilities. The aim of the present study was to shed further light on the similarities and differences across these disorders. For this purpose, 72 participants aged 8-16 ( $M_{age}=145.24$ ,  $SD=30.39$ ) with NLD ( $N = 25$ ), or DCD ( $N = 22$ ), compared with typically-developing (TD,  $N = 25$ ) peers were tested. Tasks assessing visuo-perceptual, mental rotation, fine- and gross-motor abilities were administered. Our findings revealed that, in both the visuo-perceptual and mental rotation tasks, children with NLD scored significantly lower than DCD and TD children ( $p < .035$ ). TD children overperformed both NLD and DCD children in fine-motor tasks ( $p < .001$ ), while NLD and TD children's scores were comparable in balance tasks, scoring significantly higher than the DCD group ( $p < .001$ ). This study offered some evidence to differentiate children with NLD from those with DCD, showing that visuospatial processing skills seem to be the main domain which distinguish between these two profiles.



## HIKIKOMORI SYNDROME RISK FACTORS IN A GROUP OF MIGRANT ADOLESCENTS

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The Chinese community, where minors make up about 26%, is on average the youngest foreign community in Italy. Prolonged social withdrawal known as hikikomori syndrome first emerged in Japan. Over the past twenty years, the syndrome has been studied among adolescents in other cultures and societies. Presence of the syndrome among migrant populations, however, has not been researched. This study analyzes psychosocial risk factors for the hikikomori syndrome and explores the possible link with lifestyle risk factors, an aspect which has never been investigated. These factors have been studied via a battery of validated questionnaires on a sample of 83 Chinese adolescents living in central Italy in October 2021. The results of factorial ANOVA and multiple regression analysis show that psychosocial and lifestyle factor are both determinant in the risk of the syndrome. Not having being raised by one's parents ( $p < .0001$ ), depression ( $p < .0001$ ), anxiety ( $p < .0001$ ), stress ( $p < .0001$ ), diet ( $p < .0001$ ) and sport ( $p < .001$ ) have a profound impact on the risk for hikikomori. In light of these findings, the syndrome can be considered as multifactorial: effective prevention aimed at this particularly vulnerable population, therefore, should take into account all risk factors.

## ITALIAN HEALTHY SIBLINGS OF INDIVIDUALS WITH DISABILITY: A PARALLEL MEDIATION MODEL ON SIBLING-FOCUSED PARENTIFICATION, DISTRESS, QUALITY OF RELATIONSHIP WITH PARENTS, AND BROTHER/SISTER WITH DISABILITY

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When the health siblings of a brother/sister with disability assume adult-like duties, this reversal role is known as sibling-focused parentification (Hooper et al., 2011). It has an impact on healthy sibling distress and quality of relationships. 605 healthy siblings (19-26 years) of those with disability. The hypothesized model tested the relationship between sibling-focused parentification and sibling relationship via the parallel mediation of the distress and the quality of the relationship with parents. Social support and benefits of parentification as protective factors were considered. Results showed the indirect path ( $\beta=.031$ ) between sibling-focused parentification and sibling relationship via the mediation role of the distress and the negative quality of the relationship with parents. Social support ( $\beta= -.116$ ;  $p<.001$ ) and benefits of parentification ( $\beta= -.134$ ;  $p<.001$ ) decreased the distress; benefits of parentification served also as protective factor for the quality of the relationship with parents ( $\beta= -.216$ ;  $p<.001$ ). Findings extend the knowledge regarding the impact of disability on health sibling mental health and inform family-based interventions which should involve the whole family system for improving health sibling mental health and well-being.

## THE ROLE OF DEVELOPMENTAL MILESTONES ON SUCCESSIVE DEVELOPMENT IN DOWN SYNDROME

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Down Syndrome (DS) is the most common genetic alteration responsible for intellectual disability. Individuals with DS reach developmental milestones in the same order as their Typically Developing (TD) peers, but later in life. Since research on TD has demonstrated that developmental milestones are related to later development and considering that the relationship between acquisition and later development is not clear in DS, the aim of the current study is to explore this aspect. 39 Preschoolers and 66 School-age participants with DS were involved. Information on the age of acquisition of Sitting, Walking, Babbling, and Sphincter Control was collected, with cognitive, motor, and adaptive functioning. Sitting predicted later motor development, but, with age, it became less important in predicting motor development in everyday life. Babbling predicted later language development in older children. Sphincter Control emerged as the strongest predictor of motor, cognitive, language, and adaptive skills, with its role being more evident with increasing age. Our data suggest that the age of milestones acquisition considered in the study has an influence on successive development, a role that can be due to common neural substrates, the environment, and the developmental cascade effect.

# **PSYCHOLOGY AT SCHOOL: TEACHERS' PERSPECTIVE**

## BURNOUT AND WELL-BEING: THE MEDIATING ROLE OF TEACHERS' WORK ENGAGEMENT

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The Demands-Resources Model applied to the educational context identifies teachers' burnout due to elevated job demands versus low individual resources. High burnout levels may negatively impact teachers' well-being, which enhances students' motivation. Although it has been previously shown how teachers' work engagement can reduce the impact of burnout on their well-being, its mediating role in the relation between burnout and general well-being has been neglected. The current study examines the association between work engagement, well-being, and teachers' burnout measured with the Burnout Assessment Tool (BAT). Specifically, the mediating role of work engagement in the relation between burnout and general well-being is investigated. Participants were 846 Italian teachers ( $F=91.1\%$ ;  $M=47.5$ ;  $SD=9.9$ ). We use three self-report instruments: BAT; WHO-5; UWES-3. Our findings show that work engagement partially mediates the relation between burnout and well-being. In detail, total effect,  $\beta=-0.669$ ,  $p<0.001$ ; [LL=-0.2043, UL=-0.1758]; direct effect,  $\beta=-0.453$ ,  $p<0.001$ ; [LL=-0.1467, UL=-0.1114]; indirect effect via work engagement,  $\beta=-0.216$ ,  $p<0.001$ ; [LL=-0.0728, UL=-0.0499]. Results are discussed considering the role of resources in reducing the negative effect of burnout.

## TEACHER JUSTICE AS A PROTECTIVE FACTOR AGAINST SCHOOL DROPOUT: A LONGITUDINAL STUDY

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School dropout is recognized as a serious issue for its high individual and societal costs (Dupéré et al., 2018). Although numerous risk factors have been studied, factors related to the proximal learning environment have mostly been neglected (De Witte et al., 2013). In this study we aimed to test whether an important feature of the learning environment, i.e., students' perception of being treated fairly by teachers, could reduce their intention to drop out from school. 547 9th grade students (56% male, 94% born in Italy, Mage = 13.92) answered a questionnaire on their perceptions of teacher justice and intentions to dropout at the beginning (T1), middle (T2) and end (T3) of the school year. A latent growth model indicated that intentions to dropout increased over time ( $B(SE) = .21 (.03)$ ,  $p = .000$ ) and that perceptions of teacher justice, entered as time-varying covariates, had a negative association with the increase both at T2 ( $B(SE) = -.09 (.03)$ ,  $p = .000$ ) and T3 ( $B(SE) = -.16 (.04)$ ,  $p = .000$ ). The effects were obtained after controlling for gender, nationality, motivation, and self-perceived learning difficulty. These findings suggest that teacher justice can play a relevant protective role against early school leaving and offer suggestions for research and intervention.

## PROMOTING PARTICIPATION THROUGH CLICKERS AND SMALL-TEAM TASKS: IN-SERVICE TEACHERS' PERCEPTIONS OF LARGE ONLINE CLASSES

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This study presents the opinions on clickers and small-group activities of 147 in-service teachers who took the “Metacognitive and cooperative approach” online module of the “Special specialization course for educational support activities for pupils with disabilities”, at the University of Verona, in 2020/21. The course included active teaching based on cooperative structures, frontal lessons and – to encourage engagement – ongoing feed-back sessions through Mentimeter, Google form and Zoom chat. A questionnaire was administered made up of 4 open questions and 30 items (Cronbach  $\alpha = .917$ ) on a 6-point Likert scale. 135 teachers responded (78.5% F). Good levels of satisfaction and interest are revealed; the clickers allow greater involvement than free in plenary discussion; the work in pairs/small groups is perceived as the most effective for learning. The thematic analysis confirms participants' satisfaction with the collaborative activities and the role of feedback in facilitating greater engagement. The results reaffirm the importance of active methodologies and point to the usefulness of clickers and team-work to stimulate real-time discussion in big online university classes, promoting student-centred teaching/learning processes within detailed micro-planned lessons.

## THE IMPACT OF IMPLICIT QUALITY OF STUDENT-TEACHER RELATIONSHIP ON MATHEMATICS TASKS: AN AFFECTIVE PRIMING PARADIGM

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Although a vast literature suggests that the quality of student-teacher relationship (QSTR) represent a crucial factor on academic achievement is still not clear how these mechanisms affect cognitive performance. This work investigated the impact of the QSTR on mathematics performance in a sample of 181 children of primary school. We used an experimental procedure: the teacher's facial expression (TFE; prime stimulus) in three repeated conditions (joy vs anger vs scramble face) was presented before a mathematical task. Separate analyses have been conducted for closeness and conflict. As to the closeness, a significant effect of the TFE was found,  $F(2,232)=6.53$ ,  $p<.01$ : in the joy condition more accurate performances compared to both the anger and scramble condition were found. Interaction between TFE and closeness was found,  $F(2,232)=6.96$ ,  $p<.01$ . As to the conflict, a significant effect of the TFE was found,  $F(2, 232) = 4.73$ ,  $p <.05$ : in the joy condition more accurate performances compared to both the anger and scramble condition were found. Interaction between emotional face condition and conflict was found,  $F(2,232)=4.16$ ,  $p<.01$ . The teachers' joyful or angry face expression impact on performance, especially when they are displayed in the context of a positive QSTR.



# **RECENT PERSPECTIVES IN EARLY DEVELOPMENT**

## COMPLEMENTARY FEEDING AND MATERNAL RESPONSIVENESS IN A LONGITUDINAL SAMPLE OF 8- AND 12-MONTH-OLD INFANTS

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In Western countries, infants are usually introduced to solids through spoon-fed pureed foods (parent-led weaning, PLW), although an approach known as “baby-led weaning” (BLW) is becoming popular. Infants exposed to BLW participate in family meals and usually eat independently. We investigated the relationship between complementary feeding and maternal responsiveness to infant feeding cues in a longitudinal sample of 181 infants aged 8 and 12 months. From video-recorded meals, we coded the proportion of time infants self-fed and rated maternal responsiveness by means of the Responsiveness to Child Feeding Cues Scale (Hodges et al., 2013). Mothers reported the complementary feeding method used. Maternal responsiveness was higher at 12 than at 8 months of age, reflecting either an infants’ increased ability to communicate or a mothers’ increased ability to interpret their cues, or both. Mothers were more responsive to infants’ hunger than fullness cues, possibly due to an evolutionary drive to protect infants from starvation. Responsiveness to fullness was positively correlated with the proportion of infant self-feeding, suggesting that a complementary feeding approach that emphasizes independent feeding may have implications for the development of infant self-regulation.

## ASSOCIATION BETWEEN PRAGMATICS AND EXECUTIVE FUNCTIONS: AN EXPLORATIVE STUDY WITH 24- TO 47-MONTH-OLD CHILDREN

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The relation between pragmatics and executive functions has been extensively documented in adulthood, while it remains little explored in infancy. The study aimed at verifying the association between pragmatics and executive functions in 24–47-month-olds. Parents of 181 toddlers (F 53%; Mage=35.35; SD=7.70) filled in the LUI-It to assess communication with gestures (Part 1), words (Part 2) and longer sentences (Part 3). Executive functions were evaluated by educators through the BRIEF-P, that includes 5 scales, 3 indexes, and a total score. Bivariate and partial correlations (controlling for age and sex) confirmed the negative associations between pragmatic abilities (Part 2, Part 3 and total score) and difficulties in executive functioning, with coefficients ranging from  $-.21$  to  $-.54$ . Part 1 was positively associated with scales and indices of the BRIEF-P ( $r=.15$  to  $.22$ ); however, these associations were not found when partial correlations were run. As expected, 24–35-month-olds ( $n=96$ ; Mage=29.03; SD=3.71) showed higher difficulties in executive functioning and lower pragmatic abilities than 36–47-month-olds ( $n=85$ ; Mage=42.49; SD=3.79). The study confirmed the interplay between different executive functions and pragmatic competences.

## THE ANTICIPATION OF A HUMANOID ROBOT ACTION BY 17-MONTH-OLD CHILDREN: AN EYE-TRACKING STUDY

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Several studies show that, in the first months of life, infants anticipate human goal-directed actions (GDA) indicating that they understand the intention underlying an action. Studying this phenomenon in relation to the robotic agent is relevant to understanding whether infants can perceive a humanoid robot as an intentional partner. However, to date, GDA has remained understudied within the child-robot relationship. The present study aimed to compare the anticipation of a human's action with that of a humanoid robot in thirty 17-month-olds. The children watched four video clips, in which either a human or a humanoid robot performed a GDA, i.e., touching a target object. The children's eye movement was measured using the eye-tracking technique. Results showed that children anticipated the action of both agents ( $p < .001$ ) with no difference in anticipation times between human and robot ( $p > .05$ ). In addition, results indicated different attentional patterns for the two agents, showing greater attention to the robot face than to the human face ( $p < .05$ ). Overall, the results suggested that 17-month-olds also understand the underlying intention of a humanoid robot's action, and the robot's face is an important predictor of GDA.

## DECODING FUNCTIONAL BRAIN NETWORKS THROUGH GRAPH MEASURES IN INFANCY: THE CASE OF EMOTIONAL FACES

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Graph measures are an optimal way to investigate functional neural networks, yet their application is still limited in developmental samples. To uncover the functional organization of 7-months-old infants' networks, we combined a decoding technique to graph metrics computation. As nodes highly connected to other nodes in the same functional module facilitate functional specialization, we computed nodes' Within Module Degree Z Score as a measure of modular organization. Then, through the Principal Component Regression, we decoded networks' functional organizations across EEG alpha and theta bands in response to static and dynamic facial emotional expressions. Our results show that infants' brain activity contains enough information to differentiate between static and dynamic facial expressions of emotion. We hypothesize this to be due to the involvement of visual streams and sensorimotor areas, as often observed in adults. Moreover, invariances in functional networks organization indicate the presence of a rudimentary network structure tuned to face processing already at 7-months of age. Overall, our results affirm the fruitfulness of the application of graph measures in developmental samples, due to their flexibility and the wealth of information they provide.

# **RECENT PERSPECTIVES ON ASSESSMENT AND INTERVENTION**

## ON THE IMPACT OF WORKING MEMORY AND MATH ANXIETY ON MATH PERFORMANCE: A DUAL-TASK STUDY

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Many studies have documented the negative impact of Math Anxiety (MA) on math performance (Caviola et al., 2022). In this vein, it has been suggested that MA could affect cognitive processes such as attentional control and working memory (WM). Specifically, MA may activate intrusive thoughts that could reduce WM resources, thus resulting in poor performance (Eysenck & Calvo, 1992). This study aims at investigating the interplay between MA and cognitive resources by implementing a dual-task paradigm. About 200 4th and 5th graders were tested. We used standardized measures to evaluate math abilities (timed and no-timed tasks), fluid intelligence, and aspects related to MA. Two computerized tasks were developed, one testing arithmetic competencies alone (stand-alone task), the other requiring to recall a set of words after completing arithmetic problems (combined task). Following the theoretical background, low math performance is expected in children with high MA, with a more pronounced effect in the timed standardized mathematical tasks. Similarly for the computerized tasks, high-MA children are expected to perform poorer than low-MA children in the combined task versus the stand-alone task. Altogether, these results will reflect the additional load placed by the worrisome thoughts on children's WM resources.

## THE CLASSROOM COMMUNITY SCALE IN FACE-TO-FACE UNIVERSITY COURSES: FACTORIAL STRUCTURE AND CONVERGENT/DIVERGENT VALIDITY

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The Sense of Community (SC) in university context is connected to academic success, student participation and satisfaction. One of the most common tools to measure SC in the university context is the Classroom Community Scale (CCS). It is made up of the two subscales Connectedness and Learning (Rovai, 2002). Although CCS is used in both online and face-to-face courses (e.g., Drouin & Vartanian, 2010), its factorial structure has not yet been confirmed for face-to-face courses. For this reason, this study aims to verify the factorial structure and the convergent/divergent validity of the CCS in face-to-face university courses. CSS was administered to 420 students (84% F). The data collected, analyzed using the Explorative Structural Equation Model, partially confirm the original bifactorial structure and the two factors show good internal consistency ( $.81 < \text{Cronbach } \alpha < .89$ ). A further analysis conducted on 175 students (89% F) shows good convergent and divergent validity in relation to the Italian Scale of Community Sense (Prezza et al, 1999) and the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988), a similar but distinct construct from the SC. The scale is a useful tool for planning, monitoring and evaluating university face-to-face courses.



## TELEFE: A NEW TOOL FOR THE TELE-ASSESSMENT OF EXECUTIVE FUNCTIONS FROM 6 TO 12 YEARS OLD

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There has been a growing interest in the tele-assessment of cognitive abilities in the developmental age in the last few years. Despite its many advantages, there are still doubts about the validity and reliability of the tele-assessment, especially when conducted using tests designed for in-person administration. For this reason, the importance of having ad hoc tests designed for remote administration has emerged. The aim of the present study is to test the validity and reliability of the TeleFE, a new test battery created ad hoc for the remote assessment of executive functions in children aged 6 to 12 years. The battery, which consists of three tests designed to assess inhibition, working memory, and cognitive flexibility, was administered to 500 children from first to fifth grade. In order to obtain a measure of the concurrent validity of the battery, children were also administered standardized tests to assess executive functions, while parents and teachers were asked to complete the QUFE questionnaire on executive functions. Finally, given that the battery allow also the in-person administration, we wanted to investigate whether there were any significant differences between the two administration modalities.

## BRAZELTON'S HOME-VISITING INTERVENTION: A REVIEW

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Brazelton suggests a Home-Visiting intervention to increase parents' sensitivity and knowledge about their child's development using an anticipatory guidance of the difficulties they will encounter. Given that there aren't reviews of studies about Home-Visiting Brazelton approach, we attempted to analyse the effectiveness of this approach. We conducted a comprehensive search for empirical studies using the main data-base using the terms: neonatal behavioral observation, NBO, anticipatory guidance, NBAS, home treatment- visit, Health intervention- visit. We consulted also several reference lists. 91 records were identified and 17 records selected. We coded studies for demographic and methodological features. Methodological features included risk measure, Home-Visiting frequency & method, group of control presence, measures & outcomes. The effectiveness of interventions has been tested according to 3 levels of analysis: children's, mothers' and home visitors' outcome. Regarding child's development and mothers' depression and self-confidence the results are inconclusive. Regarding mother-infant interaction, results consistently showed a significant improvement in the intervention group. Results are also univocal about the increase of parents' knowledge about their child.

# **RELATIONS AMONG DOMAINS IN SCHOOL AGED CHILDREN**

## THE ROLE OF EMOTIONAL ASPECTS ON ARITHMETIC WORD PROBLEM-SOLVING IN PRIMARY SCHOOL CHILDREN

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Previous studies found emotional factors, such as math anxiety, to be consistently related to students' poor math performance. However, less is known about the link between math anxiety and children's arithmetic word problem-solving achievement. A construct that seems to be associated with anxiety is the perceived task difficulty: judgments of difficulty may arouse feelings of worry which negatively impact students' performance. In this presentation, data on the contributions of math anxiety and perceived task difficulty to arithmetic word problem-solving performance among primary school students will be reported. Fifth graders were administered a math anxiety scale, an arithmetic word problem task and a task evaluating the perception of problems' difficulty. In particular, the arithmetic problem-solving task included compare problems which contain a relational term (e.g., more than and less than) that compares the value of two variables. Results revealed that math anxiety significantly predicted students' problem-solving achievement and it completely mediated the relationship between perceived task difficulty and problem-solving performance. Moreover, a gender difference in math anxiety was found. Theoretical and practical implications of the findings will be discussed.

## THE DEVELOPMENT OF INHIBITORY CONTROL IN PRESCHOOL CHILDREN: ADULT AND ROBOT'S GAZE-CUEING EFFECTS

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Inhibitory control (IC) is a key component of the self-regulatory processes. However, studies focusing on social signals through which adults can support the development of IC are still lacking. Gaze direction is a strong social signal that might play a role in development of IC skills, as it convey a wealth of information about others' attention focus and their emotional and mental states. The present study examined whether adult's gaze can support IC skills in pre-school children. To this end, 4 to 5 years old children took part in the Head-Toes-Knees-Shoulders task (HTKS) associated with a gaze cueing paradigm. During the HTKS task, the adult oriented the gaze on the target body part (congruent trials) or on the body part toward which the child should inhibit his/her response (incongruent trials). In a within-subjects experiment, the HTKS task associated with gaze cueing paradigm was administered by both a human examiner and a humanoid robot (iCub) to test whether (1) the gaze cue facilitates or impairs responses (2) observing the robot may affect children's task performance similarly to observing another human . The results are discussed in the context of using robots to test (and possibly train) inhibitory control skills.

## RELATIONSHIP BETWEEN COPYING ABILITY AND THE OTHER WRITING ABILITIES

*Anna Maria Re (Università degli Studi di Torino), Francesca De Vita (Università degli Studi di Torino), Cesare Cornoldi (Università degli Studi di Padova), Susanna Schmidt (Università degli Studi di Torino)*

The ability to copy a text quickly and accurately is important both in school and in daily life. Our study analyses the relationship between copying ability and other writing skills. For this purpose, 674 children with typical development (TD) and 65 children with learning disability (LD) from sixth to eighth grade were tested with a copying task taken from the BVSCO-3 and all other writing tasks included in the same instrument: handwriting speed tasks, spelling tasks, and expressive writing tasks. The aim of the study was to find out whether the copying task could distinguish the TD group from the LD group and whether the other writing skills could predict performance on the copying task. The results showed that children with LD performed worse on the copying task than TD children, both in terms of speed (number of words copied) and accuracy (% of errors). Copying speed was predicted by grade level and by all three writing skills for TD children, but only by handwriting speed and spelling for LD children. Copying accuracy was predicted by gender and all three writing skills for TD children, but only by spelling skills for LD children. These results suggest that children with LD also have difficulty copying a text and benefit less than TD children from their other writing skills

## RELATIONSHIP BETWEEN EXECUTIVE FUNCTIONS AND SOCIO-EMOTIONAL COMPETENCE IN PRESCHOOL CHILDREN

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Executive Functions is a broad term referring to several skills required for academic performances, goal-oriented activities, and socio-relational skills (Zelazo, & Müller, 2011). This results in a positive adjustment, less involvement in dysregulated behaviours, and more satisfactory relationships with peers in a long-term perspective. 158 kindergarten children were enrolled in the present study (M=77; F=81); direct and indirect measures of Socio-Emotional Competence and Executive Functions were used. Findings showed that children's performance in the emotional comprehension task (TEC Global Score) was significantly associated with the teacher's evaluation of their socio-emotional behaviours (CBS prosocial subscale),  $r=.238$ ;  $p=.009$ . Nonetheless, this latter dimension is negatively correlated with an adaptive executive functioning (Inhibition Brief-P subscale),  $r= -.476$ ,  $p<.001$ . In conclusion, since socio-emotional competence is a critical developmental ability whose development seems to be impacted by the children's executive functioning, it ought to consider the essential role of educational support of these skills to foster adaptive developmental trajectories.

# THE PSYCHOLOGICAL IMPACT OF PARENTING



## INCREASING REFUGEES' WORK AND JOB SEARCH SELF-EFFICACY PERCEPTIONS BY DEVELOPING CAREER ADAPTABILITY

*Diego Boerchi (Università Cattolica del Sacro Cuore), Roberta Morici (Università Cattolica del Sacro Cuore), Federico Brajda Bruno (Università Cattolica del Sacro Cuore)*

Today's unstable labor market increasingly requires flexibility and adaptability to cope with the threat of unemployment. Though this threat can cause distress in many people, its negative impact is even more significant on vulnerable workers such as refugees. This study aimed to explore if a career counseling intervention designed for refugees (CCfR) preceded increases in career adaptability and, therefore, perceptions of both work self-efficacy (WSe) and job search self-efficacy (JSSe). The study was conducted in Italy and involved a sample of 233 refugees, who were asked to respond to a questionnaire available in three languages (Italian, French, and English). Data analysis showed that improvement was demonstrated in all the variables considered, namely, career adaptability (composed by concern, control, confidence, and curiosity), WSe, and JSSe. In addition, the increase in career adaptability explained the increase in refugees' WSe and JSSe; at the opposite, only the initial level of curiosity was found to explain the increase in WSe, while JSSe was completely independent from the initial level of the career adaptability.

## CHINESE PARENTS' ATTITUDES TOWARDS CHILD DEFENDING BEHAVIOUR IN TYPICAL AND PREJUDICE BASED BULLYING CONTEXTS

*Leyla De Amicis (University of Glasgow, Scotland), Yuqing Xue (University of Glasgow, UK)*

School bullying is a widespread phenomenon in China and different types of prejudice-based bullying have also been reported in this country. Children's active bystander intervention is an effective strategy for reducing bullying, but it is not often carried out. This might be because this type of action is not encouraged by relevant adults. This study explored Chinese parents' attitudes towards their own children's potential defending behavior in an unspecific and two prejudice based bullying scenarios. Data on participants' moral disengagement and preferred action if their children were bullied or were bullying others were also measured. Two-hundred -sixty-one Chinese parents of 9-11 years old pupils filled out an online survey on their views on, and potential reactions to, child bystander intervention. Results showed that parents expected less emotional intensity in the weight stigma bullying scenario and considered the option of their children's active defending as the less favourable one, across all the scenarios. Moral disengagement among Chinese parents was low but was positively correlated with their authoritarian attitudes towards both victims and bullies. Practical implications and future research directions for cross-cultural studies will be discussed.

## DO PRENATAL DEPRESSION AFFECT THE NEWBORN WELLBEING IN HIGH-RISK PREGNANCY? THE MEDIATING ROLE OF WEEKS OF GESTATION

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Hospitalized women due to high-risk pregnancy experience as a severe stress that enhances the risk for prenatal depressive symptoms. Maternal prenatal depression, in turn, increases the risk of preterm delivery and poor newborn outcomes in terms of Apgar score. This study investigated the predictive role of maternal depression on Apgar score analyzing the mediating role of gestation age at birth in a group of 76 women with high-risk pregnancy ( $M_{age}=35.39$ ;  $SD=5.59$ ). The data was collected at two different times: Edinburgh Postnatal Depression Scale, was assessed at T1 (at the beginning of hospitalization for high-risk pregnancy); the gestational weeks and Apgar score were registered at T2 (the day of childbirth). A mediational analysis was conducted using the MPLUS statistical program. The results showed that prenatal maternal depressive symptoms did not constitute a direct risk factor for the Apgar of the newborn. However, results highlighted a significant indirect effect ( $\beta=-.19$ ,  $p<.01$ ; CI 95%:  $-.097$ ;  $-.004$ ): depression negatively affects gestational weeks that, in turn, influence the Apgar index. Our data highlight the importance of considering the presence of depression, especially in a situation of hospitalization.

## UNDERSTAND DOCTOR-PATIENT-CAREGIVER COMMUNICATION TO FOSTER PATIENT ENGAGEMENT. A QUALITATIVE STUDY

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Consider doctor-patient communication is important for patient engagement. Sometimes, during visits caregivers are also present, e.g. partner, family member. Aim of the study is investigate doctor-patient-caregiver communication, with particular attention to what happens in the therapeutic relationship and patient engagement when a caregiver is present or absent. 14 patients with different chronic diseases, 6 doctors, 9 caregivers were recruited. Communication exchanges were audio-recorded and subsequently transcribed to carry out a content analysis; to deepen the non-verbal aspects of communication, researchers fill in an observational grid. Results showed that when caregivers are present, they participate in the conversation, sometimes overlapping with the doctor-patient dialogue. Also, non-verbal exchanges (e.g. looks, exchange of folders) differ when caregiver is present: doctors pay less attention to the patient. Understanding how much the caregiver is involved in the doctor-patient exchange is important, to assess whether this can be useful to promote patient engagement or if it is a possible obstacle. In the future it will be useful to deepen this aspect with semi-structured interviews and consider age and roles (e.g., partner, son, etc.) of patients and caregivers.

# MINITALK

## THE RELATIONSHIP BETWEEN WEANING STYLE AND INFANT DEVELOPMENT DURING THE FIRST YEAR OF LIFE: A LONGITUDINAL STUDY

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The introduction of solid food is an important developmental milestone during the first year of life. In the last 15 years, an alternative weaning method, labeled “baby-led weaning” (BLW), has received increasing attention from the scientific community and among parents. In BLW, infants participate in family meals, share the family menu, and are free to choose what and how much to eat. Research suggests that there may be a positive relationship between a baby-led weaning style and motor and language development. We conducted a longitudinal study with 188 infants at 8 and 12 months of age and asked mothers to complete questionnaires about weaning style, infant development, and socio-demographic information. After controlling for relevant co-variables, our results showed, that (i) infants who were introduced to solid food later produced their first words earlier, (ii) infants exposed to baby-led weaning understood more words and scored higher on the Developmental Profile™-3 questionnaire, (iii) infants more frequently exposed to finger foods walked earlier. Whereas most previous research has focused on dietary and health impacts of complementary feeding, these results suggest that the BLW method of feeding may have important implications for cognitive development.

## IMPACT OF CHILD TEMPERAMENT AND MATERNAL MENTAL HEALTH ON BONDING BETWEEN 3-6 MONTHS

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Parent-infant bonding is key for children's development and well-being. Evidence suggests significant associations between bonding, maternal mental health (MMH), and child temperament. However, the joint impact of MMH and child temperament on bonding remains unclear with limited research on longitudinal data. Hence, the present study aims (1) to explore the impact of MMH and child temperament on bonding at both 3 and 6 months of age and (2) to investigate factors driving changes in bonding. At infants' 3- and 6-month-age, mothers (N= 217) provided measures of bonding, depressive, and anxious symptoms, and child temperament via validated questionnaires. At 3 months, higher levels of bonding were predicted by lower levels of anxiety and depression in the mothers but also higher levels of regulation in the child. At 6 months, only lower levels of anxiety and depression predicted higher levels of bonding. Moreover, mothers showing sensible decreases in bonding were characterized by 3-to-6-month increases in depression and anxiety, as well as increased difficult child temperament. This study highlights the impact of both MMH and child's temperament on parent-infant bonding in a longitudinal sample and could offer useful information for early childhood prevention and care.

## ATTITUDES TOWARD GENDER TYPICALITY EDUCATION AT SCHOOL: BETWEEN (IN)EXPERIENCE, (UN)PREPAREDNESS, STEREOTYPES, AND BULLYING

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The literature indicates that too little attention has been given to training on gender typicality within the Italian school system. The present study aims to: (1) investigate the self-perception of gender typicality in 120 Italian university students (84% female; Mage= 20.9; SD= 1.4); (2) explore students' attitudes and experiences about gender education at school, focusing on the benefits and drawbacks of introducing gender typicality discussions in school contexts. Through thematic analysis, researchers identify three main themes: (1) (in)experience and (un)preparedness of school context; (2) gender stereotypes and prejudice; (3) gender typicality and bullying. In addition, regarding gender typicality, results highlights that 65% of the students perceived themselves as typical of their own gender (n = 78; 65% female), 30% as typical of both genders (n = 36; 29% female) and lastly 4% as typical of the other gender (n = 5; 4% female). Participants report that it is necessary to improve the knowledge about gender typicality among teachers and students of different grades to reduce gender stereotypes and prevent bullying based on gender atypicality at school.



## CAN SOCIAL EXCLUSION MODULATE THE GAZE CUEING OF VISUAL ATTENTION? A STUDY IN SCHOOL-AGED CHILDREN

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Social exclusion elicits aversive feelings that threaten important psychological needs, as it often induces considerable physiological, cognitive and behavioral changes in humans. Yet, little is known about children's response to self-experienced social exclusion. The aim of this study is to explore whether being included or excluded during a computerized ball tossing game (i.e., Cyberball) influence the processing of eye gaze direction in 6-, 8- and 10-year-old children. After being included or excluded in the Cyberball paradigm, children's social attention is assessed in a task in which they have to localize a target appearing to the left or right of a central face. Before the target appears, the participant's attention is cued to the left or right by the direction of eye gaze. Children are also asked to complete the Primary Needs Questionnaire to check the effectiveness of the Cyberball manipulation, and data on their temperamental traits are also acquired. Data collection and analyses are currently ongoing, but we expect excluded children to show less sensitivity to eye gaze cues, possibly reflecting a social cognition deficit following social exclusion. Obtained results will shed light on the impact of social exclusion on the processing of social cues across childhood.

## COMPLEMENTARY FEEDING METHOD AND PRESSURING TO EAT: AN EMPIRICAL STUDY IN 8-MONTH-OLD INFANTS

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The complementary feeding period has long-term consequences for physical, cognitive and socio-emotional well-being. Parental feeding practices during this time which are aimed at pressuring infants to eat have been associated with rapid growth in the first years of life and rejection of pressured foods into adulthood. We sought to explore how different approaches to complementary feeding relate to maternal mood, maternal stress and controlling feeding practices. Sixty videos of 8-month-old infants' mealtime experiences were coded for maternal mood, maternal stress, and complementary feeding approach. Parent-led weaning involved parents feeding infants using puréed foods on a spoon whilst baby-led weaning involved infants eating more independently and taking part in family meals. Higher levels of maternal anxiety and stress were associated with more (i) difficulties in feeding infants, (ii) greater verbal and physical prompts to eat, (iii) greater verbal and physical pressure to eat. Moreover, the emotional tone during the meal was significantly more negative for infants exposed to parent-led weaning compared to those who were baby-led weaned. Baby-led weaning infants received significantly fewer verbal and physical prompts and pressure to eat compared to their peers.

## SLEEP AND DEVELOPMENT DURING THE FIRST 8 MONTHS OF LIFE

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Changes in infant sleep are related to important acquisitions in cognitive and language domains. However, few studies examined such relations at very early ages. We investigated concurrent and longitudinal relations between sleep and development in 156 infants at 4 and 8 months of age. We assessed infants' sleep through the Brief Infant Sleep Questionnaire, cognitive maturation through the Developmental Profile™ 3 (DP-3), and infants' language understanding using the Short Form of the Italian version of the MacArthur–Bates Communicative Development Inventory: Words and Gestures. Information about infants' temperament and daily practices potentially relevant for sleep quality (e.g., the use of a pacifier, co-sleeping, exclusive breastfeeding) was detected. At 4 months of age, infants sleeping less both during the day and the night showed higher scores in the DP-3 motor subscale. At 8 months of age, infants sleeping more during the day scored higher in the DP-3 cognitive subscale; moreover, the number of gestures produced at 8 months of age was positively related to the time spent awake during the night and negatively related to the hours of day sleep at 4 months of age. Our results support the importance of healthy sleeping for infants' cognitive and socioemotional development.

## DRAW.IN.G.: A SYSTEMATIC CODING GRID TO ANALYZE CHILDREN'S DRAWINGS OF THEIR ECEC SPACES

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Although drawings were recognized among the most appropriate and feasible methods to explore children's perception of their educational physical environment (Botsoglou et al, 2017; Durak, 2009), the lack of systematics and standardized coding methods to analyze children's drawings constitutes a limitation for research in this field. In addition, the literature has highlighted the importance of interviewing children about their drawings to provide more accurate analysis (Driessnak, 2005; Haney et al, 2004). Starting from these premises, the present contribution aims to introduce a new systematic coding grid called DRAW.IN.G. (DRAWing and INTerview Grid) aimed to explore children's perceptions of the physical spaces in their Early Childhood Education and Care (ECEC) centers. A first evaluation of 120 drawings and interviews, conducted by three independent raters, allowed to identify the categories that should be included in the grid, having reached good to excellent inter-rater agreement ( $k$  range score=0.60-1). The final version of the DRAW.IN.G. coding system consists of 17 dimensions and 90 categories including physical, behavioral, relational, emotional and motivational aspects. A first application conducted with a sample of 262 preschoolers indicated the validity of the method.

## COVID-19 PANDEMIC LIFE-EVENTS AND BINGE EATING IN YOUNG ADULTS: THE INDIRECT EFFECTS OF EMOTIONAL IMPACT OF EVENTS AND SOCIAL ANXIETY

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This study explored the link between COVID-19 pandemic negative life-events and binge eating in young adults. As pandemic negative life-events may arise symptoms of emotional distress and social anxiety, we hypothesized indirect effects of these variables in the association between pandemic experiences and binge eating. Participants were 269 young adults (mean age = 19.64, SD = 1.57; 70.3% girls), recruited in November and December 2021 via an online survey. Participants reported: their pandemic experiences in the last year (i.e. negative life-events; number of days in quarantine); the long-lasting emotional impact of these experiences in the last week (i.e. intrusive thoughts; avoidance of thoughts); social anxiety; frequency of binge eating episodes. Two sequential mediation models were tested. Both the number of days in quarantine,  $\beta = .007$ , IC [.0009; .0165], and the pandemic negative life-events,  $\beta = .013$ , IC [.0018; .0293], were positively and indirectly associated with binge eating, with a sequential mediation path via (1) enhanced intrusive thoughts, and (2) increased social anxiety. Our study shed light on the inner processes behind binge eating in response to pandemic experiences, with useful implications for prevention and clinical practice.

## USING SCREEN-BASED TECHNOLOGIES TO ASSESS CURSIVE HANDWRITING IN PRIMARY SCHOOL CHILDREN

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Cursive handwriting grapho-motor skills in primary school children are assessed mostly using paper-based standardized tests (PBT), resulting in lengthy scoring and limited application. Consistent research proposed alternative use of screen-based technologies (SBT). But impact of screen vs. paper use has yet to be fully captured, some studies suggesting that surface may affect handwriting parameters (HP) [Osugi et al. 2019]. This pilot study compares data from a new SBT platform (GHEE platform, using interactive display, stylus and dedicated software) to gold standard PBT data. Four third grade primary school children (M CA 8.5 years; M IQ 105; M VMI score 101) were asked to write the same Italian phrase on a chosen ruled paper using SBT and PBT. Subsequently 4 HP were measured and compared: speed, maximum amplitude of letter fluctuation, maximum height variation of medium and ascending/descending letters. Analyses showed no significant differences in speed, maximum amplitude of letter fluctuation and maximum height variation of medium letters, while significant difference emerged in maximum height variation of ascending/descending letters ( $p=.027$ ). This result suggests to control for impact of screen use only on specific HP relevant in assessing children's handwriting.

## ENDOCRINE DISRUPTING CHEMICALS EXPOSURE IN BREAST MILK AND FORMULA AND INFANT NEUROBEHAVIORAL OUTCOMES: THE LIFE-MILCH PROJECT

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The Life MILCH Project is a longitudinal pilot study that aims to determine the association between mothers' life and nutritional habits, Endocrine Disrupting Chemicals (EDCs) levels in breastmilk or formula and infants' growth and neurodevelopment in the first year of life. 250 pregnant women in the third trimester of gestation with no gestational/fetal pathologies were enrolled at Parma Hospital. Pre- and post-natal infant exposure to EDCs was assessed through questionnaires about maternal lifestyle and nutritional habits and biological samples (maternal and infant urine, plasma, breastmilk or formula). Infants' growth and neurodevelopment were assessed at 1, 3, 6 and 12 months of age by Visual Preference Paradigm, Face-to-Face-Still-Face, Fagan test, Barrier Task and the Bayley III Scale. Maternal lifestyle, nutritional and clinical information before and after pregnancy will be correlated with EDC levels in biological samples and infants' growth and neurodevelopment. Since perceptive, socioemotional, cognitive, behavioral and global developmental areas are susceptible to EDCs exposure, this ongoing study may provide early biomarkers of effects on infant neurobehavioral outcomes depending on EDCs exposures. Life MILCH (<https://lifemilch.eu>) - LIFE18ENV/IT/000460.

## DOES TEMPORAL CONTINGENCY DIFFERENTIALLY DRIVE CHILDREN'S CHOICES FOR SOCIAL AND NON-SOCIAL STIMULI DURING PRESCHOOL YEARS?

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Coordinating with others relies on the abilities to contingently respond to communicative signals and requires anticipating other's behaviours. Sensitivity to sensorimotor contingencies has been observed from early life and contributes to establish the basis for predicting others' (re)actions. The early ability to exploit regularities and associate specific actions with external events allows individuals to construct an internal representation of the physical and social world, preparing the system to respond coherently. In this study, we asked whether 3- to 6-years-olds' choices amongst pairs of stimuli are influenced by the rapidity they respond to children's actions. We presented pairs of stimuli rotating from lateral to frontal position immediately following participant's action or after a variable time delay. To investigate whether the social value of stimuli modulates children's choices, we included objects (non-social condition) and faces which could respond either looking or not looking towards the participant (engaging and non-engaging conditions). We measure the reaction times and choices towards each stimulus. Results will be discussed from a developmental perspective, specifically focusing on the role of contingency and social value in modulating children's choices.



## BRIDGES BETWEEN DELIBERATIVE DIALOGUES AND ARGUMENTATIVE WRITING

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Deliberative dialogues promote argumentative skills. Although there are many experimental studies that show the benefits of this type of dialogue, there are few studies that explore the discursive processes that define their quality. This study arises from a previous research, in which we assessed the effectiveness of four instructional programs on argumentative synthesis writing. Our objectives were: to design a coding tool to evaluate the quality of deliberative dialogues, to analyze the relationship between the quality of these dialogues and the different instructional practices, and to analyze the impact of these dialogues on the learning of the integration processes showed in the discourse and in different written syntheses. Dialogues were developed by 49 students, from three secondary schools located in Madrid. The coding tool was elaborated following a mixed deductive-inductive process. The results revealed that there was no relationship between the type of instructional practice received and the discourse quality. Likewise, the discussion sessions played a relevant role within the intervention programs, favoring the processes of integration of arguments and counterarguments during the successive dialogues, as well as the quality of the written argumentative syntheses.

## EVALUATION OF THE EFFECTIVENESS OF AN ONLINE GROUP ON THE WELL-BEING OF SIBLINGS OF PEOPLE WITH DRAVET SYNDROME

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The research aims to evaluate the potential and limits of an online support intervention for the brothers / sisters of boys / girls with Dravet syndrome. The project aimed to develop an online psycho-educational group intervention model based on the principles of ACT (Acceptance Commitment Therapy), with high accessibility, possibility of individualization, low cost and high adherence. Participants were 9 (2 males and 7 females) aged between 19 and 40 (M 27.4; SD 7.93). The application of the intervention involved 4 phases: definition of the outcomes with the association of families that financed the project, pre-test phase in which an ad hoc questionnaire and the test Outcomes Questionnaire 45.2 were administered - (OQ45 .2; Lambert et al., 2004), 10 sessions of 1 hour and 30 minutes every two weeks at the end of which the participants took the post test; The results seem to suggest a good efficacy of the path in promoting psychological well-being and maintaining adherence to the group of syblings; the descriptive analyzes suggest that the online modality may better approach the characteristics of the support groups of rare diseases such as Dravet syndrome.

## EVIDENCE-BASED PROJECTS FOR THE PROMOTION OF PSYCHOLOGICAL WELL-BEING IN ADOLESCENTS

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The contribution presents a doctoral project on peers' relationships, use of ICTs and bullying and cyberbullying behaviors in adolescence. Within the framework of evidence-based practices and Game-based learning, the research adopts a Serious Game (SG) developed specifically to investigate common social experiences, involve subjects in a process of transformation, implementing positive changes in prosocial behaviors and attitudes; a preliminary focus group will be realized to identify preadolescents' perceptions about social interactions and roles in (cyber)bullying. The research objectives are to investigate attitudes and behaviors related to medias and peers' relationships, to promote empathy and prosocial behaviors, contrasting moral disengagement and reducing cyberbullying. The use of ICTs changed how youth experience social life, therefore educators and scholars invested in the prevention of digital risky behaviors should investigate this tool for social expression. The project poses two questions: 1. Positive use of technology can lower aggressions and cyberbullying episodes; 2. Serious Games can enhance levels of empathy, emotional regulation, and moral disengagement in preadolescence, since positive use of digital tools is a crucial issue related to peers' relationships.

## ARE STEREOTYPES AND PERSONAL VALUES ASSOCIATED WITH SEXTING BEHAVIORS? DIFFERENCES BETWEEN NORTHERN AND SOUTHERN ITALIAN ADOLESCENTS

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Literature highlighted correlations between sexting and gender stereotypes. However there are no studies investigating the association between sexting and personal values. The study aimed at exploring differences in sexting between Northern and Southern Italian adolescents. Participants were 260 adolescents (M<sub>Age</sub> = 17.74) from Lombardy (51.2%) and Sicily (48.8%), who completed a questionnaire investigating: sexting, ambivalence toward men, ambivalent sexism and basic personal values. Independent sample t-tests showed that sexting is more common among Northern adolescents. Bivariate correlations were conducted to examine the associations between the investigated variables, distinguishing for provenience. No significant correlations emerged in the Northern sample. Conversely, sexting behavior, openness to change ( $r = .263^{**}$ ) and benevolence toward men ( $r = -.188^*$ ) were correlated in the Southern sample. Finally, regression showed that openness to change ( $\beta = .267^{**}$ ) and benevolence toward men ( $\beta = -.193^*$ ) explain "sending sext" in Southern Italy ( $F = 7.392, p = .001; R^2 = 11\%$ ). This exploratory study suggests that a higher tendency to embrace change and pursue new ideas and a minor positive attitude toward men, are more associated to sexting in Southern Italy.

## PSYCHOLOGICAL IMPACT OF COVID 19 PANDEMIC IN PREADOLESCENTS AND ADOLESCENTS WITH TYPE 1 DIABETES

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Covid 19 pandemic has caused mental health consequences. Young and people with chronic disease are particularly vulnerable to stress exposure. Our aim is to observe the trajectory of glycemic control and psychological well being of young with type 1 diabetes (T1D) after one year of Covid 19. We followed a cohort of youths with T1D of Pediatric Diabetes Unit of University Hospital of Padova. Inclusion criteria were: 12–20 years, T1D duration of at least 1 year. We analyzed mean glucose, time in range (TIR, % 70–180 mg/dL), Time Above Range (TAR, % >180 mg/dL) and Time Below Range (TBR, % > 54 <69). For psychological symptoms it was used Test of Anxiety and Depression (TAD). Glucose metrics and psychological data were collected during the first lockdown and during the second wave. This is the first longitudinal study that has examined psychological wellbeing of preadolescents and adolescents with T1D. Data show that after 1 year of pandemic, the improvement of glycemic control appears stable into time and that depression and anxiety symptoms get worse in preadolescents. Results confirm that repeated exposure to stress and potentially traumatic events could increase the risk of psychological morbidity in people with higher vulnerability, as people with chronic disease.

## THE POTENTIAL IMPACT OF NEONATAL CONTINUOUS GLUCOSE MONITORING ON NEURODEVELOPMENTAL OUTCOMES IN VERY PRETERM INFANTS

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Tight glycemc control in very preterm newborns should be critical to prevent poor neurological and neurodevelopmental outcome. Here, we report an interim analysis of the “BabyGlucoLight” project, aiming to evaluate whether continuous glucose monitoring (CGM) and glycemc control during the first week of life could improve neurodevelopmental outcome. Very preterm newborns with gestational age  $\leq 32$  weeks or birthweight  $\leq 1500$ g were enrolled and assigned randomly to either the experimental group, who received glucose intakes adjusted according to CGM, or the control group, who received the standard glucose therapy. Executive function development was evaluated in these patients at 12 months of corrected age. Follow-up included the Bayley Scales of Infant and Toddler Development III (BSID-III) and a computerized task evaluating memory capacity. Currently, data are available for 17 patients (7F). No significant correlations between BSID-III scores ( $M \pm SD$ ) [cognition: EG ( $100.62 \pm 15.45SD$ ), CG ( $98.57 \pm 12.48$ ); language: EG ( $98 \pm 7.92$ ), CG ( $92.14 \pm 7.92$ ); motor: EG ( $94 \pm 12.97$ ), CG ( $95 \pm 6.93$ ); socioemotional: EG ( $103 \pm 9.97$ ), CG ( $98.57 \pm 6.26$ )] and CGM were found. Preliminary results of the visual memory task showed higher memory capacity for the EG than the CG.

## THE INFLUENCE OF ROMANTIC ATTACHMENT AND SENSE OF COMMUNITY ON GENERATIVE CONCERN

*Antonio Dellagiulia (Università Salesiana di Roma), Giulia Camera (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Romantic attachment and sense of community could have an influence on generative concern, the ability to nurture and lead the next generation. Thus, this research aims to explore a link between romantic attachment, sense of community and generative concern. 427 subjects (61.8% women; Mage46.6; SD = 10.6) completed the Experiences in Close Relationships Revised Scale, Italian Sense of Community Scale, Loyola Generativity Scale, and Generativity Behaviors Checklist. A multiple linear regression was used to see if sociodemographic variables, romantic attachment and sense of community predict generative concern. It was found that education ( $\beta = .652, p = .024$ ), anxiety ( $\beta = -.053, p = .030$ ), sense of community ( $\beta = .219, p = .001$ ) significantly predicted generative concern, but sex ( $\beta = -.912, p = .215$ ), age ( $\beta = .039, p = .296$ ), number of children ( $\beta = -.096, p = .699$ ), and avoidance ( $\beta = .057, p = .051$ ) didn't. These results may indicate that higher levels of education help people understand the importance of promoting future generations, and a greater sense of belonging to one's community strengthens social identity and responsible concern for younger individuals, whereas anxious subjects are less likely to experience the latter due to doubts regarding the reliability of people.

## SEN & DISTANCE LEARNING: NEURODIVERSITY AND THE NEW INCLUSIVE PLATFORM BEST-DAD

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Distance learning activated during the COVID-19 emergency has revealed critical issues regarding the participation of students with special educational needs (SEN). Students with SEN have been found to have different structuring of brain areas and different functioning of some cognitive abilities. In order to cater for this neuro-diversity a user-friendly and adaptive distance learning platform has been created to suit various learner profiles. Furthermore, the platform was conceived as an environment aimed at rebuilding relationships in order to promote school inclusion. The platform and its functions were presented to both teachers and students to best accommodate learner profiles. A questionnaire was used to investigate the teachers' response to the platform. Data analysis revealed that respondents appreciated the intuitiveness of the design, its functionality for learning purposes and the positive washback effect on promoting classroom dynamics and learners' motivation.



## ONLINE SEXUAL HARASSMENT AMONG ADOLESCENTS: DEFINITION AND MEASUREMENT

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Online sexual harassment is still little known in the peer-to-peer context: the lack of validated measures including all associated behaviors makes it difficult to compare the data relating to the prevalence of the phenomenon and to better understand its characteristics. A recent review of the literature highlighted only one validated instrument for measuring online sexual harassment among peers. This work aims to validate this scale, the Peer Sexual Cybervictimization Scale (SCV), in the Italian context, analyzing its psychometric properties and collecting data on the prevalence of the phenomenon among peers, with particular attention to age and gender differences. 1384 adolescents from 21 schools in Tuscany (mean age of 13.84), participated in the study. The factorial structure of the original scale was investigated through an exploratory and then confirmatory analysis. The results confirm the validity of the instrument [ $\chi^2(27) = 87.127$ , RMSEA = .04; CFI = .93, TLI = 91]. The results highlight a unique construct of online harassment alongside a dimension of Non-consensual sharing. Gender differences also emerge: girls are more victimized than boys.

## SEX VARIABILITY IN INFANTS OXTR METHYLATION ASSOCIATES WITH NEGATIVE EMOTIONALITY AT 3 MONTHS

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Sex-specific differences in DNA methylation of the oxytocin receptor gene (OXTR) have been shown in adults and are related to internalizing psychopathology. Negative emotionality (NE) early in life is an antecedent of the internalizing spectrum and is partly under genetic control. However, sex-specific variations in OXTR methylation in infants and its associations with NE are still unknown. Here, we explored sex differences in infant OXTR methylation and the association with infant NE. Infants and their mothers (N=270) were recruited at delivery. Infants' OXTR methylation was assessed in 13 CpG sites in buccal cells at birth while 3-months-age NE was assessed by mothers using the IBQ-R questionnaire. OXTR methylation at 11 CpG sites was higher in females than in males. Moreover, higher infant OXTR methylation at 6 CpG sites was associated with greater NE in males, but not in females. These results provide new insights into the role of sex-dependent epigenetic mechanisms involving OXTR methylation in predicting early infants' NE. Understanding the degree to which epigenetic processes relate to early temperamental variations may help inform the etiology of later childhood psychopathological outcomes.

## ELEMENTARY SCHOOL STUDENTS' PERCEPTION OF ANXIETY SYMPTOMS DURING THE COVID-19 PANDEMIC: THE CONNECTION TO THE QUALITY OF SOCIAL RELATIONSHIPS IN THE CLASSROOM

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Research shows that anxiety experienced in the school setting is negatively correlated with academic success; in the current historical context, characterized by the emergence of the COVID-19 pandemic, an increase in anxiety and depressive symptoms has also been observed, even in school-aged children. Our study explores school-aged children's perception of anxiety symptoms, and correlations between the manifestation of anxiety symptoms and social relationships in the classroom context. Participants included 1523 elementary school students (mean age=7.64; SD=0.96; 50.62% female). The protocol included Revised Children's Manifest Anxiety Scale, Second Edition (RCMAS-2), Student Teacher Relationship Scale (STRS), Strengths and Difficulties Questionnaire (SDQ), Sociometric Test. Conflict in teacher relationship correlates with defensive attitudes ( $r=.06$ ;  $p<.05$ ); unexpectedly, closeness correlates with physiological symptoms ( $r=.12$ ;  $p<.01$ ), worry ( $r=.09$ ;  $p<.01$ ), social anxiety ( $r=.08$ ;  $p<.01$ ), and anxiety in general ( $r=.10$ ;  $p<.01$ ); finally, dependence correlates with worry ( $r=-.07$ ;  $p<.05$ ) and total anxiety ( $r=-.06$ ;  $p<.05$ ). Lastly, physiological anxiety correlates with prosocial behaviors ( $r=.07$ ;  $p<.05$ ).

## ATTITUDE TOWARDS INCLUSION: AN INVESTIGATION AMONG TEACHERS FROM ALL THE SCHOOL GRADES

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Schoolteachers are always challenged with the inclusion of disability, but few studies in the scientific literature investigated their attitude towards inclusion at all the school grades. To fill this gap, we investigated on a sample of 1571 teachers from all the school grades (kindergarten, primary school, middle school, secondary school). The Impact of Inclusion questionnaire and the Marlowe-Crowne social desirability scale were administered. The results showed a positive correlation between social desirability and the dimensions of the attitude towards inclusion (Teacher's  $r=0.36$ , Environment's  $r=0.30$ , Other's  $r=0.27$ ), indicating that the tendency to respond with positive attitude towards inclusion could also be influenced by a social desirability effect. Secondly, a one-way ANOVA comparing the scores of inclusion according to the school level found a difference between kindergarten-primary teachers and middle school-high school teachers in the four dimensions of inclusion. Therefore, kindergarten and primary school teachers have a slighter negative attitude towards inclusion compared to higher school education level, and this attitude is accompanied by a social desirability effect, in particular concerning the impact on teacher.

## EXPLORING THE ROLE OF FLUID INTELLIGENCE AND COGNITIVE STYLES ON CHILDREN' DIVERGENT THINKING

*Marco Giancola (Università degli Studi dell'Aquila), Simonetta D'amico (Università degli Studi dell'Aquila)*

In a sample of Italian children, the current study addressed the role of fluid intelligence (Gf) and field dependent-independent cognitive style (FDI) in divergent thinking (DT). Gf was assessed by the Colored Progressive Matrices (CPM), the children's predisposition toward FDI by the Embedded Figure Test for children (CEFT), whilst DT was evaluated using the Alternative Uses Tasks (AUT). Results showed that FDI mediated the Gf-DT link, suggesting that DT represents a blend of different agents, including information processing, reasoning, and cognitive strategies. These findings suggest that whereas Gf is essential for evaluating the degree of usability and functionality of new ideas, FDI is necessary for employing and managing Gf skills during the idea generation.

## DARK TRIAD, TRAIT EMOTIONAL INTELLIGENCE, AND SOCIAL SUSTAINABILITY DURING LATE ADOLESCENCE. A MEDIATION STUDY

*Marco Giancola (Università degli Studi dell'Aquila), Massimiliano Palmiero (Università degli Studi dell'Aquila), Simonetta D'amico (Università degli Studi dell'Aquila)*

Adolescence yields an enhanced awareness and responsibility toward the community, representing a critical developmental stage for prosocial behaviors. In a sample of 129 healthy late adolescents, the current research explores the impact of the dark triad on prosocial behavior based on altruism and equity, also addressing the mediation role of Trait Emotional Intelligence (TEI). Participants filled in the Dark Triad Dirty Dozen, measuring Machiavellianism, psychopathy, and narcissism; the Altruistic Action Scale, evaluating behaviors directed at helping others; the Equity Scale, assessing behaviors directed at equity in different forms; and the TEI Questionnaire-Short Form. Results revealed that TEI mediated the negative effects of the three dark triad traits on both altruism and equity, suggesting that TEI, which relies on a set of dispositions (e.g., emotional management of others, social competence, and empathy), might reduce the malevolent effects of the dark triad on altruism and equitable behavior in late adolescence. These findings led to assume that intervention programs focused on improving emotional skills, also in late adolescence, can promote pro-sociality.

## THE DEVELOPMENTAL TRAJECTORIES OF THE BEHAVIORAL PHENOTYPE AND NEUROPSYCHIATRIC FUNCTIONING IN CORNELIA DE LANGE AND RUBINSTEIN TAYBI SYNDROMES: A LONGITUDINAL STUDY

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There is evidence that several neuropsychiatric disorders and changes in the behavioral phenotype arise with the growth of children affected by Cornelia de Lange Syndrome (CdLS) and Rubinstein-Taybi Syndrome (RSTS). We aim to outline these changing pathways across the lifespan in CdLS and RSTS, through a longitudinal study design to overcome the methodological limits of previous cross-sectional studies. The sample includes 14 patients with CdLS and 15 with RSTS recruited through convenience sampling at neuropsychiatric follow-ups. Cognitive, behavioral, emotional, and autism assessments were carried out in two different timepoints. Our findings highlight that the cognitive profile of CdLS is subjected to a worsening trend with decreasing IQ/GQ scores, whereas RSTS shows a stable IQ/GQ over time. Patients affected by RSTS show greater improvements compared to CdLS in expressive language, daily living skills, social abilities, and motor skills across the lifespan. Both syndromes report a downward trend in emotional and behavioral difficulties even if CdLS exhibit a major deterioration compared to individuals with RSTS. Being aware of the early dysfunctional patterns which might pave the way for later impairments is the first step for planning preventive interventions.

## FAMILY PURCHASE DECISION-MAKING DURING FOOD BUYING

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Family purchase decision-making is the purchase process involving all family members including the child who has an active role. To influence and modify parental buying preferences, children use a wide range of strategies that can be grouped into bargaining, persuasive, emotional, and simple request strategies. The objective of this study was to investigate the factors that influence how the child participates in and influences family purchasing of healthy and unhealthy food. Parents (N = 165; mothers = 88.8%) reported on the frequency of use of children's influence strategies when asking to buy healthy and unhealthy food, sociodemographic variables, frequency of co-shopping, and family emotional climate style. With moderation analyses, we tested the moderation role of co-shopping frequency and child gender on the association among child age, family emotional climate, and each child's strategy. Among all results, younger children used Bargaining strategies more than older children when asking both for healthy and unhealthy food. This was moderated by the frequency of co-shopping and the gender of the child. Persuasive and Emotional strategies, but not Simply requests, are more used only when asking for healthy food, by females who have more experience of co-shopping with parents



## PATTERNS OF SLEEP AND ADAPTIVE FUNCTIONING: A LONGITUDINAL STUDY IN PRESCHOOL AGE

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Preschoolers' sleep is a biomarker of child's regulatory development (Bruni et al., 2020) and predicts developmental outcomes (El-Sheikh & Sadeh, 2015). Although it depends on a complex interplay between biology and culture (Jenni & O'Connor, 2005), research on Italian children is scant. To contribute to fill this gap, 59 preschoolers were followed longitudinally (T1 October; T2 March and T3 May). Wake After Sleep Onset, Sleep Efficiency, Total Sleep Time and Sleep Regulatory Index (Philips et al., 2017), collected at T1 through a wristwatch-like device worn for 7 consecutive days, were extracted through a validated computation (Guarnieri et al., 2020). The 4 actigraphic measures were subjected to a two-phased cluster analysis (Henry et al., 2005) which revealed 2 groups: bad sleepers (N=30), sleeping longer but less effectively and awakening more frequently and efficient sleepers (N=29) with an opposite pattern,  $-2.90 < t(57) < 8.59$ ,  $p < .05$ . Compared to the seconds, the firsts were lower in T1-parent reported soothability and higher in fear, lower on T2-teacher reported-emotion regulation and more dependent from the teacher, all  $p < .05$ . Significant interaction between cluster and gender, controlling for IQ, were found on T3-school readiness standardized measures, all  $p < .05$ .

## THE CONTRIBUTION OF SOURCING SKILLS ON INTERTEXTUAL INTEGRATION SKILLS IN MIDDLE SCHOOL STUDENTS' READING OF MULTIPLE TEXTS

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Many studies have found that evaluating the trustworthiness and usefulness of document sources is an important skill in learning multiple texts. However, few research have investigated how paying attention to source information helps readers learn to appropriately integrate read texts. The purpose of the present study was to investigate the extent to which sourcing skills predict intertextual integration skills in reading multimedia texts. A total of 181 adolescents attending middle school participated in the research (M-age [SD]= 11.95 [1.05]). Participants completed following tasks: Source Knowledge Inventory, Sentence Verification and Prior Knowledge. Correlational analyses indicated significant interactions between source identification skills and integration skills. Hierarchical regression analyses show that sourcing skills and prior knowledge are two independent predictors of intertextual integration skills. The final adjusted model is significant and explained 20 % of variance in integration skills. These results suggest that high sourcing performances and high prior knowledge imply higher multimedia text integration skills. From an educational perspective, improving sourcing skills could benefit students' abilities to use the best intertextual integration strategies.

## MATERNAL PARENTING AND PRESCHOOLERS' SOCIAL-EMOTIONAL COMPETENCE: A LONGITUDINAL STUDY

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Interactions with mothers are fundamental for children's social-emotional development. Previous research reported that parenting stress might influence parenting behaviors, and these, in turn, might impact children's adjustment. This study aimed at evaluating the relations over time (at a distance of 2 years) between maternal positive parenting, parenting stress, and preschoolers' social-emotional competence. Participants were 91 Sicilian mothers, aged from 22 to 47 years ( $M = 35$ ,  $SD = 6$ ) with at least a preschool child from 3 to 6 years old ( $M = 5$ ,  $SD = 1$ ). Mothers filled self-report scales about positive parenting, parenting stress, and scales about their children's social-emotional competence. Results showed (a) positive relations between positive parenting and child's prosocial and communicative skills at time 0; (b) a negative relation between parental distress and child's emotional regulation and communication skills at time 0; (c) a negative longitudinal relation between positive parenting and parenting stress. Findings stressed that both maternal positive parenting and stress should be addressed when planning interventions promoting the development of social-emotional competences in preschoolers, by also taking into account how positive parenting impacts mothers' stress

## SOCIAL REJECTION AND PERFORMANCE FEARS IN YOUTH WITH AUTISM SPECTRUM DISORDERS AND SPECIFIC LEARNING DISORDERS: THE ROLE OF EMOTION RECOGNITION

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Youth with Autism spectrum disorders (ASD) and Specific learning disorders (SLD) often experience social anxiety. As such, understanding other people's emotions is essential for adaptive interpersonal functioning. This study aimed to assess emotion recognition (ER) skills and how they can predict distinct components of social anxiety (SA) in youth with ASD and SLD, as compared to typical development (TD). The study involved 33 participants with ASD without ID, 36 with SLD and 69 with TD aged 8-16 years, matched for age, gender and IQ. They were administered a facial ER matching task, and parents filled the Multidimensional Anxiety Scale for Children (MASC 2; March 2012) for the evaluation of SA (social rejection, performance fears). Beyond differences in ER accuracy, significant interaction effects emerged between group and ER on social rejection: ASD faced higher levels of SA when better recognizing other's emotions, whereas SLD had higher levels of SA when worse detecting them. Instead, performance fears were best explained by the group membership, with ASD obtaining higher scores than TD. Overall, our findings suggest that SA might be present with unique patterns in both groups, and ER might be involved in the development of social rejection in youth with different conditions.

## LINKING TYPES OF EMOTION REGULATION TO PRO-ENVIRONMENT BEHAVIORS: A MEDIATIONAL MODEL WITH ECO-EMPATHY AND HELPLESSNESS BELIEFS TOWARDS THE ENVIRONMENT

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Pro-environmental behaviors (PEBs) are essential to preserving nature, and young adults are key stakeholders in this regard, as future leaders in society. Research showed that eco-empathy (EE) and helplessness beliefs towards the environment (HBTE) may be linked to one's levels of PEBs. Moreover, Self-determination Theory argue that also different emotion regulation strategies may shape personal behaviors and attitudes towards environment. In line with these considerations, the present study aimed to investigate the relations among Dysregulation (D), Suppressive Regulation, Integrative Regulation (IR), EE and HBTE and PEBs during emerging adulthood. A total of 305 young adults ( $M = 21.03$ ;  $SD = 1.53$ ) filled a protocol assessing study's variables. Structural Equation Modelling with latent variables showed that D was positively associated with HBTE, whilst IR was positively related to EE. Furthermore, PEBs were negatively linked to HBTE and positively to EE. A significant indirect path was found from IR to PEBs by EE. Results highlight that Integrative Regulation may foster PEBs by eco-empathy. Educational programs aimed at improving emotion regulation and one's ability to relate to environment-related issues should be implemented.

## DOES PRIMARY SCHOOL STUDENTS' PERFORMANCE BENEFIT FROM AN OUTDOOR LESSON IN THE GREENNESS? AN EXPLORATORY STUDY

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Research has documented that short-term exposures to natural environments benefit students' attention in typical lab tasks. The present study explored whether such cognitive benefits may also emerge in a typical school task that requires sustained attention, that is, a series of math operations. In a within-subjects design, students (N=18) were taught two lessons each with a duration of forty minutes: one in the indoor classroom environment and the other in the green environment of the school garden. Math performance was measured before and after each lesson. The results showed statistically significant higher scores in the math task after the lesson in the green environment [ $F(3,15)=5,12, p=.012, \text{partial eta squared}=.506$ ]. In contrast, no significant differences emerged between students' performances before and after the lesson held in the classroom. These exploratory findings are promising as they suggest that a short exposure to nature during a school lesson can be helpful for young students as their attention is more slowly depleted, if not regenerated, in the greenness in accordance with the attention restoration theory.

## EMOTIONAL INTELLIGENCE TRAITS CAN MEDIATE THE RELATIONSHIP BETWEEN PERSONAL BIOSPHERIC VALUES AND PRO-ENVIRONMENTAL BEHAVIORS IN YOUNG PEOPLE?

*Vanessa Marchetti (Lumsa Università di Roma), Giacomo Angelini (Lumsa Università di Roma), Luciano Romano (Università Europea)*

More research aims to explain Pro-Environmental Behaviors (PEBs). Furthermore, few studies focused on relation between emotional intelligence traits and personal values set. According to the recent literature we have included in our analysis the emotional intelligent traits as a possible component of pro-environmental behavior, in young people, considering the role of personal values. The current study aims to examine the mediating role of Emotional Intelligence Traits in the relation between Biospheric Values and Pro-Environmental Behaviors (PEBs). We use self-report instruments: TEIQue- SF, GEB and EPV-Q in a sample of 200 young adults. Correlations and moderated regressions analyzes were conducted to test the hypotheses. Our findings show that Emotional Intelligence Traits partially mediated the relation between Biospheric Values and PEBs, and Biospheric Values predicts PEBs. Total effect ( $C= 1.869$ ;  $\beta= 0.485$ ;  $p=0.000$ ); direct effect ( $C'=1.729$ ;  $p=0.000$ ;  $\beta=0.449$ ); indirect effect via Emotional Intelligence Traits ( $a= 0.428$ ;  $\beta=0.168$ ;  $p=0.018$ ;  $b=0.327$ ;  $\beta=0.216$ ;  $p=0.000$ ). Results confirm our hypothesis are needed further studies to expand the results.

## PROUD OF YOU - AN ACTION RESEARCH IN HIGH-RISK SCHOOL CONTEXTS

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The Proud of You project is an action-research oriented alternative teaching with the aim of increasing school engagement and reduce drop-out. The alternative teaching consists of cooperative learning activities with a break from the frontal setting and took place in extracurricular hours and in an extracurricular environment, from October to December 2021. School engagement was measured before and after the activities by administering two questionnaires that measured students' mood at school and classroom climate, respectively. A total of 324 fourth and fifth grade elementary school students from two institutions placed in high-risk settings participated in the project. In addition, qualitative data were collected through Specimen descriptions, written by two observers, and a focus group conducted at the end of the project with teachers who actively participated. The data revealed rather high levels of engagement, with both children and teachers highly appreciative of the extramural activities: in particular, children stated that they would like to go to school more if there were more activities like those carried out during the project, and teachers were in favor of bringing the methodology adopted by the project into the school.



## USE OF DIGITAL DEVICES IN CHILDREN AND PARENTS' MEDIATION PRACTICES: AN EXPLORATORY STUDY

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In the present contribution we aimed to adapt the questionnaire Television Mediation Scale (Valkenburg et al., 1999) to the use of Digital Devices (DD) in Italian children and to study the relation between Mediation Practice (MP), frequency of use of DD in children and cultural level of parents. Participants were 100 parents of children aged 3-6 years ( $M=4.82$ ;  $SD=1.18$ ), recruited between via an online survey. Participants reported: MP they used when their children used DD and how often their children use DD. The study also included a re-test after 14 days for parents who agreed to be re-contacted (still in course). The factorial analysis showed three dimensions of mediation practices, like the original version of the questionnaire: Instructive ( $\alpha=.911$ ), Restrictive ( $\alpha=.648$ ), and Social Coviewing ( $\alpha=.798$ ). No significant correlations emerged between mediation practices and cultural level. Frequency of use of DD was correlated positively with Social Coviewing ( $r=.433^{**}$ ) and negatively with Restrictive ( $r=-.329^{**}$ ). The present study partly confirmed the evidence of the literature in the relation between frequency of use of DD in children and parents' mediation strategies, but we did not find any correlation with cultural level of parents.

## GRASP OF CONSCIOUSNESS IN UNIVERSITY STUDENTS: THE ROLE OF REFLECTIVE ACTIVITY

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**Background:**As the literature clearly shows,supporting the development of reflective awareness skills is undoubtedly an important element in learning processes.We refer to Pierre Vermersch's psycho-phenomenological approach and Piaget's theory of cognitive awareness.The psycho-phenomenological perspective is based on a conversational approach defined by elicitation interviews (Vermersch,1994) and centered on the reconstruction by the participants of the lived experience. The narrative flow aims for a reflective return.  
**Aim:**Promote in students a process grasp of consciousness of their activity and their role within the university context. We will be presented the analysis of experiences related to two cases of students. **Method:**Narrative interviews inspired by Elicitation interviews.Two students of the University of Salerno took part in the research.The texts were analyzed using a hermeneutic–interpretive approach. **Results:**The reflective activity offered students the opportunity to (re)live the experience by affecting their perception of themselves,their relationship with the context,and their emotional experience. **Conclusions:**The reflective activity promoted by self-narrative can represent a valuable tool for the promotion of resilience and coping skills.

## EXPLORING GENDER DIFFERENCES IN CODING AT THE BEGINNING OF PRIMARY SCHOOL

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The gender gap in Computer Science is documented worldwide. The literature suggests that an advantage for boys in coding tasks may begin to emerge already since preschool. In the present study we explored this hypothesis, examining whether the coding abilities of 1st graders, at their first experience with coding, are affected by gender differences, and if their presence associates with gender differences in executive functions (EF), in particular in response inhibition and planning skills. Earlier research has shown a strong association between children's coding abilities and their EF, as well as the existence of gender differences in the maturation of response inhibition and planning skills, but with an advantage for girls. In this work we assessed the coding skills and EF (response inhibition and planning) skills of 109 Italian first graders, 45 girls and 64 boys, before an introductory coding course, when the children had no prior experience of it. We then repeated the assessment after the children had been exposed to learning of coding. The results show no statistically significant difference between girls and boys at the pretest, but an advantage in coding for boys at the posttest, without any differences appearing in EF between boys and girls.

## “I WANT TO BE YOU”: THE PSYCHOLOGICAL DRIVERS BEHIND THE PURCHASE INTENTIONS OF INFLUENCERS FOLLOWERS

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Research on influencer's marketing has vastly revealed that there is a strong relationship between people's purchase intentions and their willingness to imitate their favorite influencers. Yet, the literature lacks empirical evidence regarding the role of social self-efficacy and the feeling of not mattering to other people. Thus, the present study, using hierarchical regression, examined how sex, sexual orientation, connectedness with influencers, in terms of imitation, social self-efficacy, and anti-mattering perception could relate to purchase intention. A sample of 332 Italian young adults, aged between 18 and 30 ( $M = 21.8$ ;  $F = 84.5\%$ ), completed an online survey. Results showed how connectedness with influencers could moderate the relationships between social self-efficacy and purchase intention and anti-mattering perception and purchase intention. Specifically, when the connectedness with influencers is high the relationships between both independent variables and purchase intention are positive and significant. On the contrary, these relationships are not significant for young adults with low levels of connectedness with influencers. The study highlights how two different facets of self-perceived social competence impacts on influencers marketing mechanisms.

## PROBLEMATIC SMARTPHONE USE RISK AMONG THE YOUTH: AN ANALYSIS OF OTHER TECHNOLOGY RELATED PROBLEM BEHAVIOURS AND PARENTAL PSYCHOLOGICAL MOTIVES

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Problematic smartphone use (PSU) amongst youth is a topic of increasing interest. Recent findings suggest to examine both the use of specific apps and contextual factors (Canale et al., 2021; Marino et al., 2021). The present study aims at examining preadolescents and adolescents' problematic smartphone use risk, considering other technology related problematic behaviours, time spent online and parental motives in allowing children using the Internet. 121 participants aged 8-18 (80M, 41F,  $M_{age}=164.17$ ,  $SD=30.15$ ) and their parents were presented with self- and parent-report measures on smartphone use habits and time spent online, together with other technology related problematic behaviours. Moreover, parental motives in allowing children using the Internet were tested. Regression analysis showed that age, problematic social media and videogames use, self-reported time spent online and conformity parental motives were associated with PSU ( $F(4, 110)=2.69$ ,  $p=.035$ ). Data suggested a different smartphone usage pattern between preadolescent and adolescents, with the latter spending more time online than the former, notwithstanding none of them scored as PSU. Preadolescents and adolescents' parents seemed to be driven by different motives in allowing their children use the Internet.

## THE EFFECT OF MINDFUL PARENTING AND PARENTAL DISPOSITIONAL MINDFULNESS ON THE QUALITY OF DYADIC COREGULATION

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Several studies underline the impact of parent dispositional mindfulness and mindful parenting on the parent-infant relationship. However, the connection between these constructs and mother-infant dyadic coregulation has not been investigated. 30 mother and 3-months-old infant dyads were videotaped during face-to-face interaction and dyadic coregulation was coded using Fogel's Relational Coding System. Mothers completed the Five Facet Mindfulness Questionnaire and the Interpersonal Mindfulness in Parenting Scale to assess maternal dispositional mindfulness and mindful parenting. Main results evidenced a positive association between mindful parenting, specifically the ability to self-regulate during the interaction, and symmetrical coregulation ( $r = .354$ ) and a negative association between mindful parenting and asymmetrical coregulation ( $r = -.522$ ). No correlations were found between maternal dispositional mindfulness and coregulation. Results suggest that higher mindful parenting is associated with a higher quality of dyadic coregulation. Moreover, mindful parenting, a non-judgmental present-centered attention to mother-infant interactions, is more important than maternal dispositional mindfulness on the quality of dyadic coregulation. Implications for interventions are discussed.

## FEELING SAFE AND CONTENT: POSITIVE AND NEGATIVE SEXUAL MINORITY IDENTITY IN ITALIAN LESBIAN AND BISEXUAL WOMEN

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The study aimed at exploring the relationship between safe/content positive affect and internalized sexual stigma in lesbian and bisexual (LB) women, considering the effect of potential mediators such as identity self-awareness and identity uncertainty. An online survey was administered to 400 Italian women (220 lesbian and 180 bisexual women) aged 18–40 years ( $M_{age}=25.98$ ,  $SD_{age}=6.07$ ). The results showed that lesbian women reported lower internalized sexual stigma and LB-identity uncertainty and higher safe/content positive affect and LB-identity self-awareness relative to bisexual women. Higher stigma predicted lower safe/content positive affect, regardless of sexual orientation. Furthermore, LB-identity self-awareness and LB-identity uncertainty significantly mediated the relationship between internalized sexual stigma and safe/content positive affect, thus confirming the protective role of LB identity variables on LB women's mental health. The results contribute to understanding the negative and positive sexual minority identity differences between LB women. In addition, the findings highlight the relevance of protective factors (e.g., LB positive identity) in ameliorating the adverse effects of minority stress and promoting positive affect and social adjustment in LB women.

## EMOTION REGULATION AT TWO YEARS OF AGE IN A FEAR ELICITING CONTEXT: AN EXPLORATORY STUDY OF THE INTERACTIVE ROLE OF CHILDREN'S TEMPERAMENT AND MATERNAL SENSITIVITY

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Findings suggest that extrinsic and intrinsic factors, such as caregiver behaviour and child temperament, relate to children's use of regulatory strategies in emotional contexts. Most studies have assessed these two aspects separately, failing to explore their interactive effects. Moreover, the few studies which did so were mainly focused on anger contexts, leaving the child's coping with the other aversive emotion, such as fear, unexplored. The present study aimed to test the interactive effects of maternal sensitivity and child's temperamental fearfulness on the child's use of regulation strategies in a fear eliciting task. We followed 42 children by assessing their temperamental disposition at 14 months and maternal sensitivity at 24 months, and observed children's regulation strategies when they were two years old. We found direct associations of temperamental fear with avoidance and self-soothing strategies. We also found that high fearful infants who have experienced highly sensitive mothers, searched the contact with her more than children low in fear. These findings, showing the interaction effect of intrinsic and extrinsic factors on toddlers' regulatory strategies, strongly supports a view of emotion regulation development as a complex phenomenon.



## BORN TO COUNT: A PILOT STUDY ON 1-TO-1 CORRESPONDENCE IN TODDLERS

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Piaget argued that children up to the age of 7 years did not understand the 1-1 correspondence. Recent research has shown that children at 2 years are able to give each one a candy, to put at the table a plate for each one and name the people present in a room. There is a growing debate in the literature on the link between basic skills and the acquisition of future abilities. The present study intends to verify the link between one-to-one correspondence and basic numerical skills. A group of 35 Italian toddlers aged 18 to 36 months participated in a series of online tasks ( $M = 29,714$ ;  $sd = 5,453$ ) to evaluate their ability to correspond one-to-one, seriate, know Arabic numerals, counting the fingers and enumeration. Spearman's correlations indicate that the one-to-one correspondence is associated with seriation ( $r = .359$ ,  $p < .04$ ), with finger count ( $r = .401$ ,  $p = .02$ ) and with the enumeration ( $r = .458$ ,  $p < .01$ ). In conclusion, we can therefore confirm the link between one-to-one correspondence and numerical skills. Furthermore, these preliminary results may be important to teachers and educators in the design of early childhood educational interventions.

## THE RELATIONSHIP BETWEEN PARENTAL REFLECTIVE FUNCTION, PARENTAL STRESS AND ANXIETY IN A SAMPLE OF ITALIAN PARENTS OF PRE-SCHOOL CHILDREN

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Parental reflective function (PRF) is defined as the parent's ability to understand their children's behavior by reading their underlying mental states (Slade, 2005). Anxiety and parental stress within parenting can affect the relationship with the child (Bornstein, 2002). The present study aims to investigate the relationships between PRF and parental stress and anxiety, in a large sample of 196 mothers and fathers of pre-scholar children. It has been hypothesized that low PRF correlate positively with parent trait anxiety and with increased parent perceived stress (Luyten et al., 2012; Owens & Prout, 2012). The Parental Reflective Functioning Questionnaire (Luyten et al., 2017), Parenting Stress Index (Abidin, 1995) and State-Trait Anxiety Inventory (Spielberger et al., 1983) were administered. The results show that fathers have lower PRF than mothers. In addition, for mothers there are significant positive relationship between pre-mentalization and trait anxiety ( $r = .219, p < .01$ ); for fathers there are significant positive correlation between pre-mentalization with stress related to dysfunctional interaction with child ( $r = .239, p < .01$ ). These results provide information to guide the construction of parenting prevention projects aimed at the psychological children's well-being.

## ROLE OF TEACHERS' AND STUDENT'S MATHEMATICS ANXIETY AND ITS IMPLICATION IN MATHEMATICS ACHIEVEMENTS

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Mathematics Education and Cognitive Psychology share their interest in studying the causes of learning difficulties, particularly in Mathematics achievements. Mathematics Anxiety (MA) is one of the main factors which affect Mathematics achievement and it represents one of the main reasons of low performance and failure at school. Researchers have been studying the crucial role of MA in learning, but few studies have jointly assessed the levels of MA in students and teachers as well, and their respective implications in academic performance. The main hypothesis of the research is that teachers' MA levels can somehow affect student anxiety levels, which can have implications on students' performance. This study aimed to test the joint role of these factors on a sample of 50 teachers of primary and secondary school and respectively their 700 students. MTAS (Hunt & Sari, 2019), the AMAS (Caviola et al., 2017) for children and adults, the TMA (Bracken, 1993) and the AC-MT (6-11 and 11-14) (Cornoldi et al., 2020) were used. A latent modelling approach has been used because it presents several advantages as compared to traditional analyses. Results showed a predictive role of teachers' MA on mathematics achievements.

## V-ROBOTATOR: A PRELIMINARY EMPIRICAL CONTRIBUTION ON THE EFFICACY OF AN INTERVENTION TO PROMOTE SCHOOL-AGE CHILDREN'S SOCIO-EMOTIONAL WITH A VIRTUAL AGENT GROUP FACILITATOR

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Extensive research indicates that effective mastery of socio-emotional competencies is associated with greater well-being. This study is a preliminary contribution aimed to investigate the associations between children's and parents' attitudes and subjective norms about children's participation to an intervention aimed to promote their socio-emotional learning (SEL) with a virtual agent group facilitator, and children's SEL. A sample of 38 school-aged children, and their parents, filled in pre-test questionnaires about the aforementioned constructs. The program consisted of 8 online meetings of small groups of children, discussion on SEL-related content, facilitated by a virtual agent. The post-test data collection is in progress. Hierarchical regression models have been implemented considering, at the first step, children's age and gender and, at the second step, children's and parents' attitudes and subjective norms towards the intervention; the dependent variable was multi-formant children's SEL. At the pre-test, it emerged a positive impact of children's positive attitudes towards the project on children's SEL. We hypothesize that such a relationship will be stronger at the post-test; we also expect higher SEL in the post-test in comparison to the pre-test.

## THE IMPACT OF LIVING ENVIRONMENT PROFILES AND SYSTEM'S SATISFACTION ON WELL-BEING IN ITALIAN ADOLESCENTS DURING THE PANDEMIC: A LONGITUDINAL STUDY

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Recent studies showed that the COVID-19 pandemic influenced adolescents' wellbeing, especially for those who experienced difficulties in different life contexts (Cowie & Myers, 2021). This study aims to identify longitudinal profiles of Living Environment Satisfaction Changes (LESC), examining how the emerging profiles and different systems' satisfaction, family, school, and friends, moderate adolescents' wellbeing over time. Participants were 129 adolescents (52.7% females;  $M=11.08$  years,  $SD=0.48$ ) from a two-wave data collection. Results show two different profiles of LESC: a low-stable and a high-stable on LESC across time. A significant three-way interaction, profiles of LESC X Time X Family satisfaction ( $F=5.188$ ,  $df=2$ ,  $p=.007$ ) and LESC X Time X School satisfaction ( $F=5.024$ ,  $df=2$ ,  $p=.008$ ), on adolescents' wellbeing have been found. Specifically, at high levels of family and school satisfaction, adolescents with low levels of LESC during the pandemic show an increase in wellbeing over time, while those with high levels of LESC show stability. Findings suggest that family and school satisfaction represented a protective factor for adolescents during the pandemic, especially for those with low levels of LESC. Findings are discussed considering practical and clinical implications.

## CARING FOR DAUGHTERS WITH ANOREXIA NERVOSA: PERCEPTION OF THE DISEASE AND EMOTIONAL-BEHAVIORAL MODULATION OF PARENTS

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Background: According to the NICE guidelines (2017), family involvement is necessary for the treatment of Anorexia Nervosa (AN). Parental coping strategies range from critical, hostile behavior, excessive control, to disease avoidance (Treasure et al., 2020). Aims: Explore the implicit theories by which primary caregivers of patients with AN understand and interpret their role in treating and managing of the disease. Method: 19 parents (mean age=50.7) of patients of EDs public clinic (in Southern Italy) were interviewed through open and semi-structured questions. A Lexical Correspondence Analysis was applied to the verbatim transcripts to identify the main factorial dimensions. Results: First dimension: 1) the explanations are on the onset factors of the disease (lack, family, affection); 2) an interpretative void that seems to prevent any other form of explanation. Second dimension: 1) the privileged interlocutor is the context of medical care services; 2) the interlocutor is the society (cultural model) responsible for the disease. Conclusions: The analyzes of the discourses show overall the difficulties of family members in exploring the emotional dynamics of the AN and the tendency to take out of the family context every possible cause for the maintenance and evolution of the disease.

## A EUROPEAN CROSS-CULTURAL STUDY ON MATERNAL MIND-MINDEDNESS

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Mind-Mindedness (MM) is the caregiver's proclivity to treat the child as an entity with an active and autonomous mental life (Meins, 2013) and it has been shown to impact several developmental outcomes (McMahon & Bernier, 2017 for a review). Cultural differences in MM are expected but empirical evidence is scant (e.g., Dai et al., 2020) and no comparison across European cultures is thus far available. The study aims at contributing to fill this gap, by comparing MM across Italian (N=88), German (N=64), and Dutch (N=97) mothers during the videotaped interactions with their 12-month-old infants (116 boys). Mothers' mind-related comments were coded as appropriate or non-attuned (AMRCs and NAMRCs; Meins & Fernyhough, 2015). Results show that Italian mothers, compared to the others, produced the most AMRCs and NAMRCs,  $F(4, 490) = 16.38, p < .001$ . A cluster analysis to characterize mothers' profiles of MM suggested a 3-cluster solution significantly associated with mothers' cultural background, with almost half of the German mothers low in both AMRCs and NAMRCs, most of the Italian mothers high in both indexes, and the Dutch ones equally distributed across the three clusters,  $\chi^2(4, N = 249) = 37.77, p < .001$ . Findings are discussed in light of cultural variations in caregiving and MM.

## THE PARENT-REPORT VERSION OF THE HIGHLY SENSITIVE CHILD SCALE: VALIDATION AND ASSOCIATION WITH TEMPERAMENT

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Children differ in their Environmental Sensitivity (ES), which can be measured observationally or by self-report questionnaire. A parent-report scale represents an important tool for investigating ES in younger children but has to be psychometrically robust and valid. In the current multi-study paper, we validated the parent-report version of the Highly Sensitive Child (HSC) scale in Italian children. We first evaluated its factorial structure applying a series of CFAs on the total sample (Study 1, N = 1857, 6.2 years, age range: 2.6 - 14 years), and exploring potential differences between preschoolers (n = 1066, 4.2 years) and school-age children (n = 791, 8.8 years). We then investigated the HSC scale relationship with established temperament traits (Study 2, N = 329, 4.3 years). Results provided support for a bi-factor structure in the school-age group. In the preschoolers sample, support was found for a three-factor model as the bi-factor was not able to converge due to estimation problems related to one of the items. Pertaining to temperament, the HSC parent-report was moderately associated but largely distinct from temperament traits. The HSC parent-report performs well and appears to capture ES in children. However, minor adaptations are suggested for preschoolers.



## THE COGNITIVE EFFECTS OF NOISE ON THE MEMORY PERFORMANCE OF CHILDREN WITH COCHLEAR IMPLANTS

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Concentrating to perform cognitive tasks in a noisy environment requires to re-allocate mental resources to overcome the interference of noise. This process and the resulting fatigue, i.e., cognitive effort, can be detrimental to hearing children's cognitive performance and ultimately to their learning. However, we know little of how background noise affects the cognitive performance of children with hearing loss. In a pilot trial, we addressed this research question. Eight cochlear implanted (CI) children and 5 age-matched normally hearing children (NH) (7-12 years) carried out an auditory attention task and a digit span task in quiet and babble noise. Behavioral (accuracy), self-report, and psychophysiological (pupil dilation) measures were used to assess children's cognitive performance and cognitive effort. CI children performed worse than NH children in both acoustic conditions. However, no significant effects of acoustic condition (quiet/noise) were observed. Although CI children efficiently compensated for noise in performing the cognitive tasks, their pupil dilation revealed greater cognitive effort in noise than in quiet.

## THE IMPACT OF COVID-19 RELATED STRESS ON POST-TRAUMATIC GROWTH: A LONGITUDINAL STUDY

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Post Traumatic Growth (PTG) emerges as one of possible effects of the COVID-19 pandemic on adolescents. PTG can coexist with certain levels of personal distress that can represent a possible trigger of PTG, maintaining this across time. The present study aims to identify longitudinal profiles of different dimensions of COVID-19 related stress, examining how resulting profiles moderate the longitudinal PTG trajectory over-time. Participants are 156 students (53.4% females;  $M=11.52$ ;  $SD=.87$ ) from a two-wave data collection during the pandemic. Results show three different profiles of COVID-19 related stress that moderate the impact of time on two dimensions of PTG: Relating to others ( $B=-1.78$ ,  $SE=.677$ ,  $p=.01$ ) and Personal Strength ( $B=-.78$ ,  $SE=.34$ ,  $p=.02$ ). Adolescents with low-moderate levels of stress have an increase in PTG, while those with medium-high levels of stress show a decrease of PTG over time. Findings suggest that moderate levels of stress influence the longitudinal trajectory of PTG during the pandemic. Instead, for adolescents with medium and high stress, the initial high levels of PTG probably represent an immediate coping strategy to deal with the impact of the pandemic, not representing a perduring growth. Results are discussed in terms of practical implications.

## SPORTS PARTICIPATION BY A CHILD WITH ASD DURING THE COVID-19 PANDEMIC AND ITS EFFECT ON THE PSYCHOLOGICAL WELL-BEING OF THE WHOLE FAMILY: AN EXPLORATORY STUDY

*Stefania Tavarone (Università degli Studi di Modena e Reggio Emilia), Erika Benassi (Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università degli Studi di Modena e Reggio Emilia)*

Although the benefits of sport for children with Autism Spectrum Disorder (ASD) are acknowledged, little is known about its impact on families. This study explored whether sports participation by a child with ASD promoted his family's psychological well-being by longitudinally measuring the well-being of this family and comparing it with that of families with typically developing (TD) children during the COVID-19 pandemic. In three measurements (six months), the psychological well-being of sister and mother of a child with ASD involved in sports, as well as that of TD children and their mothers, was monitored. The mothers completed the GAD-7 (anxiety) and BDI-II (depression) for themselves and the CBCL (behaviors and emotions) for their children. The mother of the child with ASD constantly showed less anxious and depressive symptoms than the mothers of TD children, who worsened from T1 to T3, probably due to the worsening pandemic. Unlike the TD children, the sister of the child with ASD decreased in internalizing and externalizing symptoms. This study highlights the benefits of sports participation by children with ASD on whole family. Future research should move from case studies to experimental research expanding these findings.

## THE EFFECTS OF SOCIAL EXCLUSION ON PRESCHOOLERS' OVER-IMITATION BEHAVIORS

*Alessia Testa (Università degli Studi di Milano-Bicocca), Ermanno Quadrelli (Università degli Studi di Milano-Bicocca)*

Social exclusion, the experience of being kept apart from others physically or emotionally, has significant effects on cognitive, affective, and behavioral processes throughout the lifespan. However, little is known about its impact on imitative behaviors early in life, with only few studies showing that 5-year-olds' imitative behaviors increased after social exclusion, possibly attempting to be re-included through affiliative imitation. The current study aims at investigating whether 3- to 5-year-olds' imitative behaviors are modulated by first-person experiences of social exclusion. Pre-schoolers (N=60) behaviors' are recorded while observing a model performing causally relevant and irrelevant actions on a transparent box after being included or excluded from a live ball-tossing game (i.e., Cyberball). Data collection is currently ongoing, but we expect social interaction during the Cyberball to modulate preschoolers' over-imitation behaviors. Data on children's temperamental traits is also collected to assess their impact on social inclusion/exclusion experiences and over-imitation behaviors. Obtained results will shed light on the social factors influencing imitative behaviors in preschool age and will lay the foundations for investigating these aspects even earlier in life.

## EFFECTS OF AN INTEGRATED INTERVENTION FOR IMPROVING SELF-REGULATION SKILLS IN KIDS WITH SPECIAL NEEDS

*Valentina Tobia (Università Vita-Salute San Raffaele Milano), Laura Ghislanzoni (Ospedale San Raffaele Turro), Martina Lattanzi (Ospedale San Raffaele Turro), Michela Moretti (Ospedale San Raffaele Turro), Ilaria Polenghi (Ospedale San Raffaele Turro), Giulia Tombini (Ospedale San Raffaele Turro), Anna Ogliari (Ospedale San Raffaele Turro - Università Vita-Salute San Raffaele Milano)*

In this presentation, the results of an integrated intervention, developed in a middle school, will be presented. The objective was the empowerment of self-regulation skills and to favour school well-being in children with special needs, through the training of kids' self-regulation strategies and improvement of the support that the relational context (teachers, parents) could offer to them for the development of these strategies. The intervention included a training course for teachers and parents and workshops for empowering self-regulation skills dedicated to the kids. The sample included 20 kids with special needs in 6th and 7th grades, attending the workshops. Self- and proxy-report (teachers) measures administered pre- and post-intervention were given, assessing school wellbeing, executive functions, and – only self-report – self-regulated learning. The results show an improvement in some components of school wellbeing (e.g., self-efficacy), of executive functions (e.g., planning skills), and of the self-regulated learning (e.g., training of knowledge).

## IS ENGLISH LEARNING REALLY FUN? THE ROLE OF COGNITION, EMOTION AND METACOGNITIVE CONTROL IN LEARNING ENGLISH

*Eugenio Trotta (Università degli Studi di Foggia), Aurora Bonvino (Università degli Studi di Foggia), Paola Palladino (Università degli Studi di Foggia), Milvia Cottini (Libera Università di Bolzano)*

Several studies have shown positive correlations between metacognitive, emotional and working memory (WM) variables and second language learning (L2), although taken into consideration separately. Recent learning models suggest a combined role of cognitive, emotional and metacognitive variables in learning skills at different ages. Our aim is to identify which of the metacognitive, emotional and WM variables, as well as their interactions, are most predictive of performance in English learning at primary school. We introduced to the primary school children (N = 112) collective tests regarding emotions and motivations towards the English language learning (specifically during lessons, homework, tests) and individual tests on, learning, memory, meta cognition and English skills). Statistical analysis showed a main effect of metacognitive control as predictors of the behavioral performance of the English language learning ( $p < 0.001$ ). Although positive emotions towards English were identified, the results showed significant positive values of the correlation between negative emotional components (specifically, fear) and L2 performance. Results will be discussed in a general framework where emotion cognition and metacognition interact in the learning process.

## ATTACHMENT-AVOIDANT ADULTS, ATTENTION BIAS AND CHOICE

*Arcangelo Uccula (Università degli Studi di Sassari), Beniamina Mercante (Università degli Studi di Sassari), Eleonora Secchi (Università degli Studi di Sassari), Graziella Puggioni (Università degli Studi di Sassari), Franca Deriu (Università degli Studi di Sassari), Paolo Enrico (Università degli Studi di Sassari)*

Seeking support in distress situations is one of the cores of attachment theory, however insecure avoidant attachments often develop secondary strategies (i.e. defenses to protect themselves from rejection and to inhibit emotional states that are incongruent with the attachment system deactivated). Seventy-two participants ( $M= 23.9$ ) responded to the ECR questionnaire and took part in an experimental situation in which they had to choose between pictures of care or food, following the presentation of threatening images alternating with neutral ones. We used an eye-tracker to measure the congruence between the last fixation (considered a strong predictor of choice) and the subsequent choice. In avoidant individuals, the results show that, in both the threatening and neutral conditions, the last fixation of the care image was associated with a decrease of the choice of the same ( $\beta= -.338$ ;  $t= -3.00$ ,  $p=.004$ ), whereas the discrepant choice of the food image increased ( $\beta=.345$ ;  $t= 3.07$ ,  $p=.003$ ). When the last fixated image was the food image this effect was not found. These results seem in line with researches showing that avoidant individuals exhibit a dual-process response style that involves an early response to attachment stimuli, followed by disengagement and attentional avoidance.

## WHERE DO MOTHERS OF VISUALLY IMPAIRED CHILDREN FOCUS THEIR ATTENTION IN READING THEIR INFANT'S DIFFERENT EMOTIONAL STATES?

*Luisa Vercellino (Università di Pavia), Elisa Roberti (IRCCS Fondazione Mondino), Federica Morelli (IRCCS Fondazione Mondino), Chiara Ghiberti (IRCCS Fondazione Mondino), Sabrina Signorini (IRCCS Fondazione Mondino), Livio Provenzi (Fondazione Mondino IRCCS, Università di Pavia)*

Mothers' ability of reading their infant's emotional cues is key for development as it allows adequate and contingent responses to infant's needs. Visually impaired (VI) infants tend to present partially unclear emotional cues; thus their mothers may be challenged in responding contingently, when compared to mothers of typically developing (TD) infants. No study to our knowledge has investigated how mothers reads emotional cues of VI infants. Our aim was to compare observational patterns of VI and TD infants' mothers during a task of child's emotion recognition. VI and TD infants aged 9-12 months and their mothers participated. Mothers were shown 4 videos of their infant expressing positive or negative emotions (selected from previously recorded sessions) and they were asked to decide if a positive/negative emotion was presented. Gaze was recorded through a Tobii TX300 eye-tracker. Data collection is ongoing. Looking times proportions to the child's body vs face and eyes vs mouth will be analysed and compared between groups. The results will allow us to better understand how mothers of VI infants read their infant's emotional needs. This information could be used to better support VI children and their families.



## TALENT DEVELOPMENT AND SOCIAL EMOTIONAL LEARNING IN PRIMARY SCHOOL

*Maria Assunta Zanetti (Università di Pavia), Sara Sparaciari (Università di Pavia)*

Results from international research have shown how promoting the development of socio-emotional abilities is fundamental, not only to support the students during the growth process, but also for its positive effects on academic success. LabTalento of University of Pavia is promoting a Social Emotional Learning project in four classes of a primary school near Bergamo, with the aim of improving social and emotional skills and supporting talent development. Specifically, the project includes complementary activities inserted in the curricula program. The activities focus on specific aspects, such as recognition and control of emotions, the ability of working in groups, the development of empathy and of self-efficacy. The integration of Social Emotional Learning inside curricular didactics represents a fundamental protective factor. The effects of this project aren't analyse yet, because the last activities have been planned in May. However, students and teachers' feedback are positive: children are appearing interested about the presented contents, and teachers are obtaining competences and new forms of working which they can use later in curricular activities, paying closer attention to relational and socio-emotional factors.

# Psicologia per le Organizzazioni

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**INVITED TALK: YOUNG KEYNOTE SEZIONE  
ORGANIZZAZIONI**

# NUDGING FOR HEALTH AND SAFETY AT WORK: SHOULD WE STRIVE TO APPLY IT IN ORGANISATIONS?

*Marco De Angelis (Università di Bologna)*

More than ten years ago, nudging was defined as using the influence of the environment to promote desirable behaviours while maintaining freedom of choice (Thaler & Sunstein, 2008). Changes in the choice architecture, known as nudges, have been used in a variety of contexts to change people's behaviour. Thaler and Sunstein developed the concept of 'nudge' policies - non-regulatory mechanisms that aim to use people's cognitive biases or motivational deficits to guide their behaviour in a desired direction. Nudging has gained widespread popularity in politics, business and organisations. "Nudge management" has been defined as a management approach that applies insights from behavioural science to design organisational contexts to optimise employees' quick thinking in order to improve efficiency, effectiveness and motivation (Ebert and Freibichler, 2017). Traditional interventions (e.g., training, education and sanctions) in organisations aim to change undesirable behaviour but have had only modest results. Very often we come across organisations that are frustrated because the numerous codes of conduct that have been put in place (e.g., relating to safety) are often not adhered to, creating a breeding ground for behaviour that is harmful to employees and the organisation itself. Nudge interventions are thought to offer an appropriate response to this problem, requiring minimal time and effort from staff and providing a viable alternative to traditional organisational interventions (Haugh, 2017). In recent years, a number of field studies in industrial and organisational psychology have explored how nudges can help employees make healthier choices (e.g., increasing physical activity and healthy eating), help companies achieve sustainability goals (e.g. a greener culture) and promote existing rules in a company (e.g., safety and hygiene). Venema and van Gestel (2021) investigated how nudging is applied in the workplace to promote desirable behaviour by changing the environment. Different applications of nudges can be found: Nudges to strengthen identification within the organisation, to reduce bureaucracy in some procedures to increase organisational efficiency, to improve healthier and safer behaviours, to guide employees in the digital choice environments. Following the development of classification systems for 'nudging' interventions such as 'Mindspace' (Vlaev et al., 2016) or 'Tippme' (Hollands et al., 2017), there has been renewed interest in behaviour change in the area of health and safety in the workplace. Both frameworks incorporate insights from behavioural economics and aim to provide policy tools to influence behaviour. They classify behaviour change techniques such as priming, social norms, preconceptions and they refer to "interventions in proximal physical micro-environments" (e.g., placement of products, changing the order). But how effective are nudging interventions? A recent quantitative review (Hummel & Maedche, 2019) reveals that only 62% of nudge interventions are statistically significant, the median effect size is 21% and depends on category and context. Other meta-analyses and scoping reviews (Mertens et al., 2022; Cadario, et al., 2020; Forberger et al. 2022) provide evidence and interesting findings. "Defaults" nudges seem to be more effective than others. Nudge interventions seem to work better with so-called "inconsistent chooser": Strong attitudes, habits and intentions of the person being nudged weaken behaviour change. Digital nudging can be particularly effective when it can be used to individualise the intervention. Transparency is also an issue that needs to be discussed. Stakeholders may not be aware of the mechanisms on which nudging is based. In some organisations, it can be crucial to find the "environmental trigger" and not to neglect transparency towards the recipients of the nudge intervention. The keynote speech will address both the possibilities and the limitations and pitfalls of nudging theories and applications in the workplace.

# EMPLOYABILITY AND CAREER RESOURCES FOR SUCCESSFUL OCCUPATIONAL TRANSITIONS AND WELL-BEING

*Proponente: Alessandro Lo Presti (Università degli Studi della Campania 'Luigi Vanvitelli')*

As the increasing turbulence and unpredictability of the labour market pose additional challenges to individuals, scholars have progressively focused on characteristics, skills, attitudes, resources, and behaviours - among which employability is worth mentioning - that may support individuals in better coping with occupational transitions. Based on these considerations, this symposium includes five studies that contribute to shed light on the role of employability and related resources among students, stageurs, employees. Pace and Sciotto provided psychometric evidence about the Career Resources Questionnaire and its associations with perceived career control and decisional self-efficacy. Chiesa and Audrey examined if perceived employability mediated the associations between assimilation and goal engagement and disengagement. Scafuri et al. examined if academic socialization and identification mediated the association between trustworthiness in professors and perceived employability. Petrilli et al. examined, through a qualitative study, the main issues that underpin perceived employability among newcomers. Lo Presti and De Rosa examined competing models of direct, reversed, and reciprocal causation linking employability, subjective career success, and psychological well-being.

## THE ROLE OF PERCEIVED EMPLOYABILITY IN YOUNG ADULTS' CAREER GOAL MANAGEMENT

*Rita Chiesa (Università di Bologna), Audrey Ansay Antonio (Università di Bologna)*

The study examined the career goal management strategies of young adults based on the dual-process framework of goal management (Brandtstädter & Rothermund, 2002), which contends that assimilation is an adaptive resource that reduces goal discrepancies through purposeful modifications of one's circumstances or behavior in pursuit of the goal. Assimilation was hypothesized to be positively associated with young adults' career goal engagement and negatively associated with their career goal disengagement. Previous literature has also associated goal-directed effort with more positive attitudes about the future. Thus, perceived employability, which is important for young adults in their career phase of exploration of the labor market, was hypothesized to mediate both associations. To test the research hypotheses, a two-time study was carried out among Italian university students ( $N = 294$ ). The results confirmed that perceived employability played a mediating role in the positive relationship between assimilation and career goal engagement. Perceived employability, however, played no mediating role in the negative relationship between assimilation and career goal disengagement. The findings have implications for young adults' preparations in their university-to-work transition.

## EMPLOYABLE, SUCCESSFUL, AND HEALTHY, OR VICE VERSA? A THREE-WAVE CROSS-LAGGED ANALYSIS

*Alessandro Lo Presti (Università degli Studi della Campania 'Luigi Vanvitelli'), Assunta De Rosa (Università degli Studi della Campania 'Luigi Vanvitelli')*

This study aimed to examine the positive associations between employability and psychological well-being as mediated by subjective career success through a three-wave cross-lagged research design. Building on Warr's theory, psychological well-being was assessed by means of four complementary indicators: vigour at work, psychological symptoms, job satisfaction, and emotional exhaustion. We sampled 381 Italian employees on all the study variables across three time points over a period of eight months. Associations between variables were examined through structural equation modelling. In particular, we tested for direct causation, reversed causation, and reciprocal causation. Except for job satisfaction, the structural models encompassing the other three indicators of psychological well-being showed better goodness of fit indexes when reciprocal causation was taken into account. We found that subjective career success T2 mediated the negative associations between employability T1 on one hand, and psychological symptoms T3 and emotional exhaustion T3 on the other hand. This study showed that the longitudinal effects of employability on psychological well-being are partially mediated by subjective career success and that reversed causation exists with reference to job satisfaction.

## UNIVERSITY STUDENTS' CAREER RESOURCES AND THE ASSOCIATIONS WITH PERCEIVED CAREER CONTROL AND DECISIONAL SELF-EFFICACY

*Francesco Pace (Dipartimento di Scienze Economiche, Aziendali e Statistiche, Università degli Studi di Palermo), Giulia Sciotto (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo)*

In recent years, to better face university paths, the first approaches to the labor market, and then the actual transition, university students are asked to have broader skills, such as the ability to network, the involvement in career-related issues, and the ability to explore the characteristics of occupations as much as personal ones. The aim of this study is to confirm the psychometric properties of the Italian translation of the Career Resources Questionnaire (Hirschi et al., 2018) and the relationships between its components and two outcomes, students' perceived career control and decisional self-efficacy, among 311 university students. The results highlight differences in perceived career resources based on scientific areas of study, satisfaction with studies and proactivity in attending courses. Furthermore, several components, such as career involvement and career confidence, were positively associated with perceived career control and decision-making self-efficacy. The study aims to provide a multidimensional tool for exploring employability applied to university students, consequently favoring universities in their role of preparing students for the decoding of the labor market and of themselves as future workers.



## EMPLOYABILITY AND ENTRY INTO THE WORKFORCE: DIMENSIONS THAT INCREASE NEWCOMERS' PERCEPTIONS OF THEIR SELF-EFFICACY

*Sara Petrilli (Università Cattolica del Sacro Cuore), Laura Galuppo (Università Cattolica del Sacro Cuore),  
Silvio Carlo Ripamonti (Università Cattolica del Sacro Cuore)*

In light of the easing of the COVID-19, organizations are gradually resuming work through the hybrid smartworking mode. This shift is allowing a return to the placement of new people in internships, overcoming the difficulties of the last two years, dictated by the modes of digital onboarding and remote coaching. The contribution aims to analyze what are the issues that influence the perception of employability by newcomers during their first entry into the world of work. To this end, a group of interns from Italian companies belonging to both the manufacturing and service sectors was asked to fill in ethnographic forms which were analyzed using a qualitative methodology based on content analysis. The data made it possible to identify four dimensions that promote the perception of employability on the part of trainees: the increase in knowledge of one's professional role, the development of networks with colleagues, experiencing a relationship with a client, the development of knowledge of an organizational culture. The definition of these 4 key factors could help companies and Human Resources to better orientate any actions aimed at improving the employability of newcomers and increase the perception of interns of feeling capable and more employable on the job market.

## AN INVESTIGATION ON THE ROLE OF ACADEMIC SOCIALIZATION AND PRE-PROFESSIONAL IDENTITY IN THE RELATIONSHIP BETWEEN TRUSTWORTHINESS AND EMPLOYABILITY

*Liliya Scafuri Kovalchuk (Sapienza Università di Roma), Maria Luisa Farnese (Sapienza Università di Roma), Paola Spagnoli (Università degli Studi della Campania 'Luigi Vanvitelli')*

According to the Social Identity Theory framework, self-perceived employability may depend on graduate's capability to develop a professional identity. The aim of the present study is to explore the process of professional identity building and self-perceived employability in a sample on 535 Italian undergraduates. We assume that Universities may enhance students' pre-professional identity development through a twofold process: the academic socialization process, and trustworthiness in their professors', since they represent competent and knowledgeable social actors and may enhance future employability by exerting a modelling role. Mediating effects of socialization and identification in the trustworthiness-employability relationship were tested using the SEM framework. Results supported the tested model and showed that professors' trustworthiness was associated with students' employability both directly and through the academic socialization and identification with future professionalism paths. Self-report data and cross-sectional design were the main limitations. This study shows initial evidence of the role of trustworthiness as a cue for uncertainty reduction also for self-perceived employability, through the socialization-identification process.

# THE ROLE OF PERSONAL CHARACTERISTICS IN PERSONNEL SELECTION AND ASSESSMENT PROCESSES

*Proponente: Lorenzo Avanzi (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

Identifying the “right person”, for skills and personal characteristics, is a challenge that more than others creates a bridge between academia and the workplace market. In a particularly dynamic and unstable situation such as the current one, personal characteristics can play a decisive role both in terms of work performance and psychological well-being. The current symposium wants to offer an overview of this topic. The study by Casciano and Avanzi investigates with an experimental procedure how much biographical information can influence the trait-specific personality assessments of amicability, in a sample of students. The study by Mariani and Petruzzello investigates, through a cluster analysis, the role of job interview self-efficacy in terms of employability of a large sample of students. The study by Alessandri and Filosa, on the other hand, investigates in a large longitudinal sample, how much individuals can show different patterns of adaptation of their personality in the phases of socialization at work in terms of health and performance. Finally, the study by Costantini and Avanzi, using psychological tests and qualitative interviews, investigates the role of job crafting and conscientiousness in modulating job requests on a sample of workers with administrative roles.

## INFERENCES ON APPLICANTS' PERSONALITY TRAITS: RELATIONS BETWEEN CURRICULUM VITAE INFORMATION AND RECRUITERS' PERCEPTIONS

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This study aims to investigate the role played by self-reported biographical information (biodata) and skills during the initial steps of personnel selection. Recruiters tend to make inferences also on applicants personality traits, just by reading their resume. Assuming the trait-relevance of one biodata (volunteering) and one skill (teamwork) for the trait of agreeableness, we hypothesized that the presence of such self-reported information on a CV, would directly influence recruiter's perception of applicant's agreeableness. Thus, we manipulated the presence of these two information (biodata and skill) on a CV, creating four versions that have been randomly administered to 173 undergraduate students, along with a personality questionnaire (BFI) used for the other-report assessment. The results of MANOVA confirmed the hypothesis, as a matter of fact those who read a CV version presenting at least one of the two manipulated information, assigned higher agreeableness scores to the applicant, compared to those who read a version lacking such trait-relevant information. The manipulation had no significant effect on the other personality traits' assessment, except and consistently with previous evidence, for extraversion.

## KEY PSYCHOLOGICAL PERCEPTIONS IN MANAGEMENT DECISIONS REGARDING THE PEOPLE TO BE INVOLVED IN ORGANIZATIONAL RESTRUCTURING: A CASE STUDY

*Arianna Costantini (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Lorenzo Avanzi (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

This contribution presents a case study conducted as part of an organizational change during COVID19. The research examines how two groups identified by the management (evaluation vs. evaluation and reorganization) vary in terms of individual differences (personality, logical reasoning) and work characteristics and proactive job redesign (job demands and resources, job crafting). Results from 96 administrative employees show that the two groups report the largest significant difference in job crafting, with the group going through reorganization reporting significantly lower job crafting behaviors. The two groups also reported, to a lower extent, significant differences in conscientiousness, logical reasoning, lower cognitive load, and higher perceived autonomy. Based on these findings, a qualitative phase examined the perceptions of the group involved in the reorganization regarding their job demands, resources, and job crafting. Results suggest an ambivalent interpretation of job demands and resources. These findings contribute to making explicit the key factors that the management perceives and considers when making decisions about the people to be involved in organizational restructuring.

## CANDIDATE PROFILE CONGRUENCE AS THE KEY TO SUBSEQUENT WORKERS PSYCHOSOCIAL ADAPTATION

*Lorenzo Filosa (Dipartimento di Psicologia, Sapienza Università di Roma), Guido Alessandri (Dipartimento di Psicologia, Sapienza Università di Roma)*

The definition of the expected personality profile represents a key aspect of the candidate selection process. The fundamental idea is that it conveys the characteristics necessary to best exercise the skills required by an organizational role. The objective of this process is therefore to maximize the congruence between the “actual” candidate profile and the “ideal” profile. The greater the observed profile congruence, the better the expected adaptation of the candidate to the future work position and the lower the costs of socializing to the role. However, changes in personal characteristics naturally promoted by the processes of socialization and by life events, can produce changes in personality traits. These changes, in the long run, can compromise the congruence initially ascertained. This longitudinal study, using a large sample (over 1600 workers, 65% men) followed for three years, tries to empirically test this idea. Through the application of a model of mixed growth curves, we ascertained the existence of three different trajectories (classes) of congruence between the real and ideal profile, corresponding to three different “development classes”. These classes differ in number and in psychosocial adaptation.

## PROFILES OF JOB INTERVIEW SELF-EFFICACY AMONG STUDENTS AND WORKERS

*Marco Giovanni Mariani (Dipartimento di Psicologia, Università di Bologna)*

Nowadays, psychological resources for interacting with the employment gatekeepers are essential to outstanding in the competition for a job. Job Interview Self-efficacy (ISE) is a resource that predicts better performances during a job interview, yet its exploration is far from being exhausted. This study aims at extending ISE research by examining the existence of different profiles of ISE and the relationships between ISE profiles and demographic variables, and other variables (e.g., interview success and perceived employability). Participants – 732 Italian students, job seekers, and employees (W = 88%; age = 19-30) – completed an online survey to measure ISE, Perceived Employability and interview experience variables. A two-step cluster analysis with the five dimensions of the multidimensional ISE reported four clusters. Previous interview experience, interview success and perceived employability were associated with the belonging to specific ISE profiles. This study contributes to the empirical analysis of the ISE concept by examining the configurations it can assume and providing avenues for future research. Studying ISE profiles may inform tailored interventions for job seekers and new entrants in the labour market at a practical level.

# ONE LOCK, DIFFERENT KEYS: EXPLORING SOLUTIONS FOR ENHANCING REMOTE WORKERS' WELL-BEING

*Proponenti: Ferdinando Toscano (Università di Bologna), Teresa Galanti (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The symposium, promoted by the Smart Working for Advancement (SWAN) national research group, aims to explore the individual, group, and organizational factors that foster remote workers' well-being. To achieve this, our discussion will be centered around four studies by colleagues from different Italian universities. The first contribution will evaluate smart working as an organizational policy among those currently available in Italy, reporting workers' evaluations of this way of working, and the lights and the shadows they attribute to it. This study will be followed by an exploration of the sense of community among workers and organizational support as mediators between job demands and employees' satisfaction with smart working. We will then virtually enter the homes of remote workers, receiving insights into how the work office environment affects once again smart workers' satisfaction. Finally, we will focus attention on the employees' relationship with their supervisor as an ambivalent predictor of remote workers' family-work conflict. The symposium aims to explore how solutions at multiple levels (individual, group, and organizational) can achieve a single objective, which is also the primary goal of organizational psychologists: the well-being of (remote) workers.



## SMART-WORKING AND WORK-LIFE BALANCE ORGANIZATIONAL POLICIES: A CASE STUDY

*Francesco Tommasi (Dipartimento di Scienze Umane, Università di Verona), Ceschi Andrea (Dipartimento di Scienze Umane, Università di Verona), Riccardo Sartori (Dipartimento di Scienze Umane, Università di Verona), Mattia Zene (Dipartimento di Scienze Umane, Università di Verona)*

This study sought to improve our empirical knowledge of how employees perceive organizational policies and services such as smart working practices and their associations with employees' Work-Life Balance (WLB). In the last two years, scholarly authors and practitioners have been placing wide attention on organizational policy services to support employees' WLB. Smart working is part of this last recent interest and refers to granting employees to manage their working hours and deciding when and how to work. To pursue our aim, we first mapped the presence of organizational and societal policies in the North of Italy. Then, we conducted a cross-sectional study on a sample of 206 employees on how employees perceive and evaluate such organizational policies. Our results show that the perception of the usefulness of a certain service such as smart working represents one of the most relevant applications of organizational policies. As such, smart working results are a feasible way the balance one's work and personal life, even though there may be obstacles, such as company requests and lack of relationships with colleagues.

## JOB SATISFACTION AND PERCEIVED ORGANIZATIONAL SUPPORT DURING SMART-WORKING. THE ROLE OF A SENSE OF COMMUNITY AT WORK

*Ilaria Buonomo (Lumsa Università di Roma), Martina Pansini (Lumsa Università di Roma), Clara De Vincenzi (Lumsa Università di Roma), Bruna Ferrara (Lumsa Università di Roma)*

Changes in work assets due to the pandemic posed several challenges to employees' well-being. The literature on technologies at work address organizational support to remote working as a valuable protective factor. At the same time, social distancing due to the pandemic forced employees to new relational assets. This, in turn, shed new light on how the sense of connection and belonging to the organization impact work experiences. This contribution explores the mediating role of organizational support and sense of community at work in the link between job demands and job satisfaction in a sample of 635 smart-workers, aged 21 to 70 years old ( $M=46.7$ ,  $SD=11$ ; females=61%). One third of them already had smart-working experiences before the lockdown. Participants completed a research protocol including scales from the COPSOQ-III (Job demands, Sense of community, Job satisfaction) and a questionnaire to evaluate the Organizational structural support related to the smartworking asset. Results from a structural equation model showed a partial mediating effect of Sense of community, but Organizational support, in the link between Job demands and Job satisfaction in smart-workers. The contribution will deepen the role of such associations for future technology-based work assets.

## THE QUALITIES OF THE HOME-OFFICE ENVIRONMENT AS A KEY TO WORKER SATISFACTION IN SMART WORKING

*Alessandro Lorenzo Mura (Sapienza Università di Roma), Silvia Ariccio (Sapienza Università di Roma), Flavia Bonaiuto (Universitas Mercatorum)*

According to Politecnico di Milano's Smart Working Observatory, in the emergency phases of the COVID-19 epidemic in Italy, the number of remote workers increased by more than 1000% compared to 2019. This form of work, which entails an overlap between the working and home environments, will become an intrinsic component of the working world's future, according to the New Normal's viewpoint. Based on the JD-R model, the physical environment can simultaneously constitute a significant demand or resource that strongly impacts occupational well-being. The study's objective is to evaluate how the perception of the quality of the domestic work environment can influence satisfaction with one's own condition in Smart Working (SW). A parallel mediation model using the Perceived Workplace Environmental Quality Indicators (PWEQI) as independent variable, satisfaction as dependent variable, stress, and engagement as mediators, was evaluated involving 464 Italian smart workers. The results show how the perception of good environmental qualities of the work-home environment is crucial to reducing stress, increasing engagement, and consequently satisfaction for the SW; future developments could aim to analyze whether this well-being and job satisfaction also lead to an increase in productivity.

## NOT ALL GOOD COMES TO DO GOOD: THE DUAL ROLE OF LMX WITH RESPECT TO REMOTE WORKERS' FAMILY-WORK CONFLICT

*Ferdinando Toscano (Università di Bologna), Teresa Galanti (Università degli Studi G. d'Annunzio di Chieti-Pescara), Salvatore Zappalà (Università di Bologna)*

This study investigates the role of Leader-Member Exchange (LMX) in influencing workers' perceptions of family-work conflict (FWC) and satisfaction with remote working (SRW). It also assesses the moderating effect of employees' ability to cope (AC) with the work in the interaction between LMX and FWC. The study sample consists of 455 employees engaged in remote working activities during the COVID-19 health emergency. The results show that, surprisingly, LMX was negatively associated with FWC, and the latter was negatively associated with SRW. There were neither direct nor indirect effects of LMX on SRW, but the moderation of the AC with work on the relationship between LMX and FWC was significant and negative. In particular, the results show that, in workers who reported lower values of AC, the increase in the quality of LMX also corresponded to an increase in FWC. Conversely, in employees with very high AC, as LMX increased, FWC decreased. Good relationships with the boss in a new and challenging situation such as remote working during COVID-19 threatens employees' well-being when accompanied by poor coping skills. This study sheds light on these mechanisms and opens new questions in the literature about family-work conflict and remote working.

# SAFETY TRAINING EFFECTIVENESS: A RESEARCH AGENDA

*Proponente: Federico Ricci (Università degli Studi di Modena e Reggio Emilia)*

This symposium intends to illustrate recent scientific contributions aimed at measuring the effectiveness of safety interventions in the workplace. In fact, the International Labor Organization estimates that 6,300 people die each day from occupational adverse events and safety training, along with other factors such as safety leadership, safety standards, and safety climate, is considered critical to good prevention. Unfortunately, there is still too little scientific evidence about the characteristics of the safety training that is provided. This symposium aims to identify valid measures and methods to detect the effectiveness of safety training, to clearly define which factors determine the quality of such interventions. The symposium will present some relevant theoretical and empirical contributions: a review of the literature regarding the improvement of risk perception; the effectiveness of a model of analysis of adverse events for disseminating safety culture; research on the effectiveness of training in promoting compliance with safety standards, through the improvement of knowledge and safety climate; the evaluation of the effectiveness of an integrated training model; Training Engagement in safety courses, to promote the transfer of learning in work activities.

## THE SAFETY BOWL. A COMMON METAPHOR TO SHARE SAFETY CULTURE

*Fabrizio Bracco (Università di Genova), Michele Masini (VIE srl, Università di Genova), Tommaso Francesco Piccinno (VIE srl, Università di Genova)*

In recent decades, several accident causation models have been proposed. These models could be more or less accurate in representing the dynamics of accidents (accuracy) and effective in providing a simplified but convincing description of complex events (usability). However, we argue that, in addition to accuracy and usability, a good accident causality model should also allow for the shareability of analysis across the organization, as the culture of safety is primarily based on a common view of system dynamics. In this presentation we propose the safety bowl model, which aims to provide a depiction of complex interactions between the elements of a system and a clear metaphor, easy to understand and share with workers in safety training programs. The model is inspired by the principles of resilience engineering and visually represents accident dynamics and systemic interactions. Opinions on the model were collected by safety experts in various sociotechnical systems, and the results revealed very positive feedback on the safety bowl model's ability to accurately represent complex interactions between elements, its usability as a support tool for accident investigations, and its effectiveness in providing common ground to share safety issues across the organization.

## SAFETY TRAINING AND EFFECTIVE TRANSFER: THE ROLE OF ENGAGEMENT AND MOTIVATION IN A TWO-WAVE STUDY

*Marco Giovanni Mariani (Dipartimento di Psicologia, Università di Bologna)*

The actual transfer of acquired knowledge to the workplace achieves training effectiveness. A study by Burke and colleagues found that as the methods become more engaging, based on learners' participation in the training process, the safety courses demonstrated greater effectiveness. Despite this evidence, few researchers have studied the training transfer concerning whether and how the trainee actually feels engaged and involved. Coherently, this study examines the effects of trainees' engagement and motivation to learn on the actual transfer of training, in relation to a course of non-technical skills for safety. The sample consisted of 125 workers (Men = 90%; mean age 42 years) from an international chemical company. We collected data in two different waves using questionnaires. We adopted a mediation model to test the hypotheses. Results showed an indirect effect of trainees' engagement, as dedication and absorption in a safety training course, on the actual transfer of training through the mediation of the motivation to learn about safety issues. The program training should improve the engagement of trainees, involve the participants in safety issues, and monitor the actual transfer to the workplace.

## FACTORS INFLUENCING SAFETY COMPLIANCE IN A SAMPLE OF MECHANICAL ITALIAN COMPANIES: THE THE IMPACT OF KNOWLEDGE AND SAFETY CULTURE AFTER A SAFETY TRAINING

*Chiara Panari (Dipartimento di Scienze Economiche e Aziendali, Università di Parma), Federico Ricci (Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università degli Studi di Modena e Reggio Emilia), Annalisa Pelosi (Dipartimento di Medicina e Chirurgia, Univeristà di Parma)*

Evidence-based interventions to improve safety performance are essential, especially for the Italian mechanical sector where the accident rate is still too high. This work aimed to examine the precursors of safety compliance. In particular, we tested different models to examine the impact of four variables (the safety climate among the management and colleagues, safety knowledge, and attitude) on safety-related behaviours. A sample of mechanical Italian workers (n = 109) was involved in a safety training intervention. Before and after safety training, intervention data concerning the four precursors affecting safety-related behaviours, measured through observed objective behaviours, were collected. A model class of competing general linear models was built to determine the best model with respect to the prediction of safety-related behaviours. The results showed that knowledge and the management safety climate effectively predict safety compliance. Safety climate among colleagues and individual attitudes have no impact. This ecological research involved a non-representative convenience sample. Crucial implications concern the effectiveness of active teaching methods, and the importance of the involvement of the management in giving relevance and constructing a safety culture.



## RISK PERCEPTION AND SAFETY BEHAVIORS IN HIGH-RISK WORKERS: A SYSTEMATIC LITERATURE REVIEW

*Giulia Priolo (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Michela Vignoli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Karina Nielsen (Institute of Work Psychology, Sheffield University Management School, University of Sheffield, UK)*

Safety at work is a key concern in today's workplace. Associations between risk perception and safety behaviors have been established in several sectors, but results are mixed, and a broad understanding of this association is lacking. In this presentation, we review the last twenty years' literature on the association between risk perception and safety behaviors in high-risk sectors (e.g., construction). Specifically, we aim to explore a) how risk perception is defined; b) whether risk perception is associated with safety behaviors and c) which role contextual factors (e.g., safety climate) play in this association. Results show that most studies focused on the cognitive dimension of risk perception while failing to consider its emotional one. This narrow conceptualization of risk perception might explain the mixed results. Moreover, a crucial effect of contextual factors like safety climate was detected. Guidelines for a more comprehensive assessment of risk perception in the workplace are outlined for future studies. A better understanding of the role of risk perception, in both its cognitive and emotional dimension, in shaping safety behaviors is thus pivotal to developing efficient training able to increase safety.

## SAFETY INTEGRATED MODEL-TRAINING (SIM-T) AND ITS EVALUATION: A SAFETY TRAINING PROPOSAL FOR MECHANICAL COMPANIES

*Federico Ricci (Università degli Studi di Modena e Reggio Emilia), Massimo Nucci (Università degli Studi di Padova)*

In the EU, the number of occupational accidents is still too high, with serious social and economic consequences. We have devised an intervention called Safety Integrated Model-training (SIM-t) with the aim of unifying the most effective training methods for adults in a single proposal. SIM-t involves the use of ad hoc audiovisual materials, a participatory approach, and regular and lasting reinforcement in daily practice. The training intervention is divided into several sessions over several weeks. For its evaluation, we conducted a longitudinal study (September 2017–April 2018), with the participation of workers ( $n = 185$ ) from mechanical companies in northern Italy. Measures relating to knowledge, attitudes, behaviours, perception of the health, and safety climate were collected at baseline and in subsequent follow-ups. Overall, the participants' average safety performance at the end of the training was significantly better than the initial level. In summary, the SIM-t and its evaluation methodology are an integrated intervention proposal providing companies with a safety training protocol and a test of its effectiveness. The contents that emerged from the study suggest extending this training intervention and the evaluation of its effectiveness to different contexts.

# INTERVENTIONS IN THE FIELD OF WORK AND ORGANIZATIONAL PSYCHOLOGY: HOW CAN WE EVALUATE THEIR EFFECTIVENESS?

*Proponente: Silvia Simbula (Università degli Studi di Milano-Bicocca)*

Interventions in the field of W&O psychology aim to improve individual, group and/or organizational outcomes by preventing problems, or by promoting positive outcomes. In comparison to other research designs, the studies that encompass interventions are still scarce, although there has been an increase in the last years. On the one hand, it is difficult to design and implement interventions in the workplace; on the other, a clear methodology to evaluate interventions is still missing. Through this symposium we aim to reflect on some of the current challenges related to these interventions (from design and implementation to their evaluation) and how these can be addressed. Five contributions will be presented. Particularly, the studies carried out by the Universities of Salento and Parma intend to evaluate the effectiveness of two interventions implemented in public administrations. The University of Verona propose a nudge-based intervention for reducing employees' counterproductive behaviors at work. The University of Bologna aims at describing the implementation and the evaluation processes of interventions targeting three levels (I-G-L). Finally, the University of Milano-Bicocca intends to test the preliminary effectiveness of a mobile-app intervention among university students

## IMPROVING ORGANISATIONAL WELL-BEING THROUGH JOB CRAFTING: AN APPLICATION IN PUBLIC ADMINISTRATION WORKERS

*Emanuela Ingusci (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento), Fulvio Signore (Dipartimento di Ingegneria dell'Innovazione, Università del Salento), Andreina Madaro (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento), Alessandra Lazzazzara (Dipartimento di Scienze Sociali e Politiche, Università degli Studi di Milano Statale)*

Research in the field of organisational psychology focuses on factors that can foster a climate of well-being. In this regard, a powerful employee support measure is job crafting, a bottom-up strategy that can improve the balance between job demands and resources and increase satisfaction. Given the strategic nature of job crafting, several studies showed that interventions based on job crafting can have both an immediate and long-term impact on individual and organisational well-being in terms of self-efficacy, job performance and reduced job demands. These interventions, which are characterised by a period of training, experimentation and reflection, offer workers the opportunity to reconsider their working environment as a constellation of demands and resources that can be modified using elaboration processes. The study is in progress and aims to evaluate the effectiveness of a job crafting intervention carried out on 133 workers belonging to an Italian public administration, divided into experimental and control group, in terms of motivation and management of organisational change.

## HUMAN RESOURCES DEVELOPMENT INTERVENTION IN THE PUBLIC ADMINISTRATION: ANALYSIS OF ORGANIZATIONAL ROLES TO IMPROVE THE COLLABORATION AND EFFICIENCY OF THE ORGANIZATIONAL UNITS OPERATING ON THE SAME SUPPLY CHAIN

*Alice Bonini (Dipartimento di Scienze Economiche e Aziendali, Università di Parma), Chiara Panari (Dipartimento di Scienze Economiche e Aziendali, Università di Parma)*

At the beginning of the year 2021, the University of Parma implemented a reorganization of the Central Management Areas Units opening the possibility to develop an intervention project to promote Human Resources Development. The aim of the intervention was the analysis of work roles and work chains in order to identify role ambiguities and enhance the efficiency of administrative processes. At first, a mapping of the organizational roles of Building University Area was realized through 25 semi-structured interviews. All managers and administrative and technical staff of the Area were involved. The results showed role ambiguities perceived by technicians and an elevated fragmentation of workflows, which were discussed with all the participants in a first training intervention. The second phase is being implemented, which focuses on clarifying roles and improving coordination between O.U. involved in the same workflows, and an assessment of the impact of the intervention is planned. This intervention emphasizes the importance of overcoming a bureaucratic approach, in favor of a strategic human resources development perspective in Public Administration that focuses on role expectations related to work chains and enhances work commitment.

## REDUCING COUNTERPRODUCTIVE BEHAVIORS VIA NUDGE-BASED INTERVENTIONS IN ORGANIZATION

*Mattia Zene (Dipartimento di Scienze Umane, Università di Verona), Andrea Ceschi (Dipartimento di Scienze Umane, Università di Verona), Riccardo Sartori (Dipartimento di Scienze Umane, Università di Verona)*

Beyond positive individual dimensions, scholarly authors and practitioners are aiming to further understand the dynamics that lead employees at engaging in counterproductive work behaviors. These are specific behaviors enacted by employees which may conflate with team relationships, organizational demands and job performance. The present study purposes a nudge-based intervention for reducing employees' counterproductive behaviors at work affecting attitudes, and social norms in employees. Drawing on the Theory of Planned Behavior and the Nudge theory, we created a workplace intervention following a social engineering perspective. That is, we created a set of good social examples of relationships and communication at the workplace meant to foster positive attitudes and social norms. We collected data with a pre-/post-test research design based on a sample of  $N = 70$  employees. Analysis indicates that levels of social norms adherence and positive attitudes increase after the intervention. Conversely, counterproductive work behavior decreases which also shows to be associated with social norms and positive attitudes. These results are discussed in the view of the potentials of social engineering as an effective way to promote positive behaviors and environments at the workplace.

## IMPLEMENTATION AND EVALUATION OF POSITIVE PSYCHOLOGICAL INTERVENTIONS IN AN ITALIAN HEALTHCARE ORGANIZATION

*Edoardo Pische (Dipartimento di Scienze dell'Educazione, Università di Bologna), Greta Mazzetti (Dipartimento di Scienze dell'Educazione, Università di Bologna), Alessandra Albani (Dipartimento di Scienze dell'Educazione, Università di Bologna), Davide Giusino (Dipartimento di Psicologia, Università di Bologna), Josefina Pelaez (Department of Social Psychology, WANT Research Team, Universitat Jaume I, Spain), Marisa Salanova (Department of Social Psychology, Universitat Jaume I, France)*

Based on an integration between IGLO and JD-R model, job demands and resources can be identified at four organisational levels: Individual, Group, Leader, and Organisation. The present contribution aims to describe the implementation and evaluation processes of three interventions targeting three levels of those (I-G-L): Positive Stress Management, Positive Social Interaction, and Positive Leadership. All these interventions have been implemented and evaluated in an Italian healthcare organization within the H-WORK Horizon 2020 project and involved 185 participants (84% women; mean age = 44.69, SD = 9.77). The adopted evaluation process embraces a traditional pre and post testing approach - consisting in a baseline (T1) and final (T6) data collection - integrated with a Realist Evaluation approach (T2, T3, T4, T5) – consisting of an in-depth evaluation of the interventions' implementation and process. While the former investigates the variations of main psychological dimensions among the whole working population before and after interventions, the latter explores what elements of multilevel interventions work and why, in which circumstances and for whom the intervention is successful among the sample that have participated to at least one of the above-mentioned interventions.

## ARE SMARTPHONE-BASED INTERVENTIONS APPROPRIATE FOR DELIVERING SHORT STRESS MANAGEMENT INTERVENTIONS? A LESSON LEARNED

*Giulia Paganin (Università degli Studi di Milano-Bicocca), Silvia Simbula (Università degli Studi di Milano-Bicocca), Andrea Gragnano (Università degli Studi di Milano-Bicocca)*

Stress is a substantial risk factor among university students. Recently, it has been observed a paradigm shift from face-to-face interventions to app-based ones. Apps could help deliver effective, cheaper stress-management interventions. They allow reaching more people, guarantee users anonymity. However, results from previous studies are still inconclusive. The present pilot study aimed to investigate the preliminary effectiveness of a mobile-app (named WellBe!), its usability and user engagement. The 14-day app-based intervention was designed on positive psychology and mindfulness principles. The study involved university students, divided in intervention group (N=35) and control group (N=37), who completed questionnaires at three-time points. Results showed WellBe!' good perceived usability and user engagement, and significant partial results regarding general health, life satisfaction, and mindfulness right after the intervention, especially for bachelor students. However, it was ineffective in promoting psychological capital and decreasing stress levels. Study limitations and practical implications will be discussed. WellBe! could be a good tool to enable students to have easier access to prevention interventions and to improve their health and overall quality of life.



# LOOKING INTO THE FUTURE OF WORK AND ORGANIZATIONAL PSYCHOLOGY (WOP) IN ITALY

*Proponente: Luca P. Vecchio (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

As scholars of work and organizations, we are all aware that contemporary work and organizations are radically changing. But what about work and organizational psychology? Does it also change accordingly? And how? How is our discipline reacting to the challenges posed by the serious problems of the contemporary globalized world, such as the growth of vast economic disparities, the environmental collapse, the impact of digitalization and the rising of an “automatic society” (Stiegler, 2015)? Simplifying a lot, at least two different approaches characterize our academic community. On the one hand, psychologists are interested in exploring how this change occurs to accompany it and encourage an adaptation to the new conditions that protect the well-being of people. On the other hand, psychologists take a critical position towards change, highlighting its risks and consequences for human experience and trying to reorient its direction. These approaches are supported by different ideological and theoretical positions that also affect how research activities are carried out and how the academic system must be organized and evaluated. The symposium will thematize some of the issues mentioned here to make a proposal on the future of WOP in Italy.

## WHAT KIND OF WORK AND ORGANIZATIONAL PSYCHOLOGY (WOP) DO WE WANT FOR ITALY TODAY?

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According to Bal and Doci(2018),the influence of neoliberalism is being felt not only in the workplace,but also in how we do research and produce knowledge in our discipline,in which academics acritically accept two of neoliberalism's founding principles:individualism and the utilitarian approach.Based on this reading of the context,the study we present aims to explore the research choices and practices adopted by scholars in the M-PSI/06 sector in Italy,and their expectations and ways of envisaging the future.This study aims to contribute to the debate about the prevalent issues being investigated in WOP;the theoretical frameworks used to interpret the relationship between individuals and organizations;the space dedicated to macro-level societal issues such as inclusion and social inequalities. Twenty in-depth interviews were performed (with a sample of researchers and professors from the M-PSI/06 sector) and then examined using thematic analysis. The presentation illustrates the initial results, which reveal the contradictions and divergences regarding assumptions,critical views,and objects of investigation within WOP.Furthermore,the analysis outlines how neoliberalism is shaping M-PSI/06 members' work and offers some material with which to reflect on the future of WOP in Italy

## “BULLSHIT JOBS” IN NEOLIBERAL ACADEMIA: TALES FROM A QUALITY ASSURANCE EXPERIENCE

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The concept of “bullshit jobs”(BJ) – jobs perceived as pointless, unnecessary or pernicious (Graber, 2018) – seems highly relevant for WOP, since it triggers reflections on several psychological effects of contemporary work; however, it has not yet received enough consideration, at least in Italy. In the study we use BJ as a “sensitizing concept” for exploring ethnographically an academic experience. The “bullshit” side of academic work represents a well documented topic in the international debate (cfr. Delucchi et al., 2021), and it has been studied as a consequence of the neoliberal transformation of universities, led by a delivery and accountability logic, which emphasizes the quantitative measurement of products and services, the bureaucratization and standardization of processes. Through an auto-ethnographic account on an audit experience within the Italian “Periodic accreditation of Universities” programme, we discuss some non sense effects of the methods and criteria used to assess the quality of higher education. We finally provide reflections on alternative assessment practices, closer to the “living work” (Dejours, 1998) and more suitable to represent meaningful experiences for the people involved, with higher chances to improve the quality of university education.

## AN INQUIRY INTO DOCTORAL STUDENTS' QUEST FOR MEANING: LESSONS FOR THE FUTURE OF WORK AND ORGANIZATIONAL PSYCHOLOGY

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Coupling critical perspectives of work and organizational psychology (WOP) and current debates on neoliberalization of the academic environment, the present study investigates how doctoral students may strive to find meaning in doing their work. To pursue this aim, the study presents two different empirical studies. The first is a qualitative study that draws on WOP doctoral students' narratives (N = 5) about their viewpoint on academia and WOP as a discipline. The second is a quantitative investigation of doctoral students' experience of meaning in work. Data presents how doctoral students live an in-between condition spanning from studying as students, publishing as researchers, teaching as professors, and funds raising as entrepreneurs. This condition seems to underpin doctoral students' strive for meaning which may result in depression, anxiety and quit intention. Moreover, doctoral students' narratives reveal a novel account of academia and WOP as a discipline. We analyse this finding through the theoretical lens of critical perspectives to advance a set of recommendations for the future of WOP.

## RENEWING THE ITALIAN WAY: THE STEPPINGSTONE OF THE CRITICAL MOVEMENTS OF WORK AND ORGANIZATIONAL PSYCHOLOGY

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In work and organizational psychology (WOP), scholarly authors have been witnessing heightened the continued presence of critical movements. Among them, the Future of WOP (FoWOP) movement has been taking a stand within the field intending to propose novel accounts of the discipline. Running through a wide gamut of concerns, the FoWOP movement is defined by a unique and timely Manifesto comprising recommendations for WOP discipline and life in academia. The present study revisits the steppingstone of the FoWOP Manifesto to reflect on the future of WOP in Italy. To pursue this aim, we firstly introduce and summarize the Manifesto and the actions of the FoWOP movement since its birth (2019). Secondly, we present the results of a series of interviews with FoWOP initiators on the origin of the movement and the FoWOP perspectives. In closing, we situate the Italian WOP into the two, i.e., the FoWOP manifesto and the results of the qualitative study. This part examines the complexity and the particularistic of the Italian case and puts forth a preliminary proposal for recommendations for the future of WOP in Italy.

# IS REMOTE WORKING GOOD OR BAD FOR WORK-FAMILY/LIFE INTERFACE? EVIDENCE FROM THE PANDEMIC

*Proponenti: Monica Molino (Dipartimento di Psicologia, Università degli Studi di Torino), Michela Vignoli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

In the last two years, the COVID-19 pandemic has greatly changed the way people work, prompting governments and organizations to rely more on remote working. Although some benefits and drawbacks have been clearly identified, their impact on work-life balance is still controversial. This symposium aims to contribute to enhancing knowledge on this gap in the literature. In the first contribution, the effects of working from home on work-life interface and other outcomes are investigated among teachers. The second contribution focuses on the role played by work-family conflict in the process between workaholism and exhaustion, considering the interaction of gender and the way of work. In the third study, integration and separation strategies and organizational support are considered in order to better understand the relationship between agile work and work-life balance. Using a quali-quantitative approach, the fourth contribution highlights the mediational role of both work-family conflict and recovery to explain insomnia. Finally, the last study focuses on how boundary tactics are related to well-being and remote performance. In conclusion, due to the many factors and processes involved, a univocal answer to the question of whether working remotely is bad or good is not possible.

## I CAN GO FOR THAT! TEACHERS' PERCEPTION OF JOB DEMANDS, SELF-EFFICACY, EMOTIONAL EXHAUSTION AND WORK/LIFE INTERFACE DURING THE PANDEMIC

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As organizational contexts, schools have been significantly invested by the changes brought about by the COVID-19 pandemic: teachers have adapted to new teaching modalities and working at home they had also experienced the difficulty of managing work/life interface. These job demands (JD) have soon resulted in high contrasting pressures: a professional one keeping high educational standards and a personal one staying focused on family needs. The aim of the present study was to investigate if and to what extent the experience of working from home might have impacted on emotional exhaustion, perceived self-efficacy and work/life interface of teachers during the pandemic. Participants to the study were 195 Italian teachers who filled in an online questionnaire with measures related to this objective. Path analysis showed that an emergency management of online teaching was proved to negatively impact on work/life interface, decreasing teachers' self-efficacy and increasing their emotional exhaustion. The study highlighted the need to carefully design and manage specific job demands in the school context, generally considered a quite "conservative" context as for HRM.

## DO WOMEN AND MEN EXPERIENCE REMOTE OR PRESENCE WORK ALIKE? A STUDY ON WORKAHOLISM, WORK-FAMILY CONFLICT AND EMOTIONAL EXHAUSTION DURING THE PANDEMIC

*Carmela Buono (Università degli Studi della Campania 'Luigi Vanvitelli'), Danila Molinaro (Università degli Studi della Campania 'Luigi Vanvitelli'), Glauco Cioffi (Università degli Studi della Campania), Paola Spagnoli (Università degli Studi della Campania 'Luigi Vanvitelli')*

The process leading workaholism (WH) to emotional exhaustion (EE) through work-family conflict (WFC) is very well-known. However, specific attention should be devoted to the role played by gender and the way of working (in the presence or remotely) in this process. The present study examined the mediating role of WFC in the relationship between WH and EE, also considering the interaction between WFC and work conditions (remote work Vs presence work) and gender on EE in a sample of 603 Italian workers during the SARS-COV-2 pandemic. Results supported the mediation model. However, gender and the way of work moderated this relationship indeed, when the level of WFC was medium and high, women who worked in the presence reported higher levels of EE and, conversely, men remote workers showed higher levels of EE. The cross-sectional nature of the study and the self-report measures adopted are limits that should be considered. Practical implications are related to the gender difference in the application and consequences of remote working. It seems that further efforts still need to be made to consider and implement support programs for women in dual-career management that also include interventions for men at the same time.



## DISENTANGLE POSITIVE AND NEGATIVE EFFECTS OF AGILE WORK ON WORK-LIFE BALANCE

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Agile working (AW) is often referred to as a way to improve work-life balance (WLB) but scientific results about this are contradictory. Studies conducted during the pandemic lockdown highlighted AW may also have negative consequences on WLB. To date, a conceptual model explaining how AW affects WLB is missing. Drawing from the work-family boundary literature, the present study aims to provide and test such a conceptual model. We posit that AW may exert different intensities of work intrusion in private life. In turn, these intrusions may have positive or negative effects on work-life conflict according to the extent one wishes to integrate or separate work and non-work roles and the extent to which the organization is perceived as supportive of the WLB needs. Data collection is in progress at ten SMEs for an estimated sample of 300 agile workers. The proposed model will be tested through a series of moderated mediations predicting work-family, work-house and work-health conflicts. The study results will indicate if considering personal integration preferences and organizational support to WLB helps understand the differential effects of AW on WLB at the same time providing valuable insights into the work-life balance literature.

## HOW DO REMOTE WORKERS JUGGLE WORK AND FAMILY DURING LOCKDOWN? SOME ANSWERS FROM A FRENCH STUDY

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The lockdown imposed in March 2020 to contain the spread of the COVID-19 virus has significantly increased the number of teleworkers. In many cases, people worked remotely five days a week, with children to supervise and no opportunity to engage in social activities. The aim of the study is to examine the relationship between certain occupational and family conditions and insomnia symptoms, work-family conflict, and recovery experiences. A self-report questionnaire with closed and open-ended questions was completed by 553 remote workers. Results confirmed the presence of a double mediation of recovery and work-family conflict, explaining the indirect relationship of the presence of a “good” supervisor, the frequency of emails or calls outside working hours and the presence of children at home with insomnia. The qualitative results showed the presence of various factors at the individual, family, organizational, and cultural levels that affect the adaptation of integration or separation strategies. Despite the lack of a triangulation approach and of a longitudinal design, the mixed-methods approach allowed for a closer examination of the psychosocial processes associated with work-family conflict in an emergency situation.

## REMOTE E-WORKING AND ITS RELATIONSHIP WITH THE WORK AND FAMILY DOMAINS

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Remote e-working is widespread and continues to posit challenges in the management of the work and private domains. Previous studies investigated how boundary management tactics that individuals use to create their ideal level and style of work-home segmentation or integration can help individuals to manage the work and life domain, but results are still not clear about the processes related to well-being and performance. To fill this gap in the literature, a two-time point longitudinal study has been developed. The final sample is composed of 389 employees (mean age = 46.24; sd = 8.70; 75.84% females) working from home 1.82 days on average (sd = 0.99). In order to test the hypothesized model, we conducted multiple group structural equation modelling using maximum likelihood estimation. Overall, our hypothesized model showed a good model fit ( $\chi^2 = 14.81$ , [ $\chi^2_{\text{female}} = 8.46$ ,  $\chi^2_{\text{male}} = 6.34$ ], df = 10, p = .14, CFI = .99; TLI = 0.96; RMSEA = 0.05; SRMR = 0.02). Results showed that temporal boundary tactics affect cognitive fatigue which in turn affects remote performance, but this mediation is significant only for females. Results of this study could inform organisational interventions aimed to increase employees' well-being working remotely.

# **JOB INSECURITY, PRECARIOUSNESS, AND FLEXIBILITY: THE DARK SIDE OF JOB MARKET**

*Proponente: Antonio Chirumbolo (Dipartimento di Psicologia, Sapienza Università di Roma)*

In the last 15-20 years, factors such as the financial crisis, the recent pandemic and the war have heavily affected the global economy, the job market, and the organizations. A massive use of flexibility at work and a high unemployment rate have increased feelings of uncertainty, precarity and insecurity among the workers. Within this macro-scenario, the present symposium focuses on topics related to the psychological effects of such insecurity at work and how to cope with it. The first paper deals with managing a career within an uncertain and flexible job market, considering the role of need for closure and proactive personality on career self-efficacy. The second one illustrates the features of a new scale for the assessment of job insecurity and its relations with several individual and work outcomes. In the third paper, the link between job insecurity and life uncertainty with psycho-social well-being and life-related outcomes is examined. The fourth presents a three-wave longitudinal study about the effects of job insecurity on several job attitudes, while the last one investigates the differential influence of affective and cognitive qualitative job insecurity on different aspects of flow at work.

## WHEN TOMORROW COMES. WILL I BE READY TO FACE THE DEMANDS OF THE NEOLIBERAL IDEOLOGY? UNIVERSITY TO WORK TRANSITION

*Barbara Barbieri (Università di Cagliari), Marina Mondo (Università di Cagliari), Silvia De Simone (Università di Cagliari), Jessica Pileri (Sapienza Università di Roma)*

The integration of young people into the labour market is a major challenge for all advanced economies to avoid early job insecurity. Increasing and systematic job insecurity can lead to the social exclusion of young people, especially those at the time of their first job. In this direction, the transition from university to work is a crucial and delicate stage for graduates with little or no previous professional experience. They have difficulty finding their way and to make a choice in an uncertain job market that requires proactive and flexible career management. This research examines the moderating role of need for cognitive closure in the indirect association between proactive personality and career self-efficacy through boundaryless mind-set in a sample of 762 adults enrolled at the university or recently graduated therein. Findings suggest that proactive personality positively and indirectly affected career self-efficacy. Moreover, we found that the effect of proactive personality was stronger than the effect of boundaryless mind-set. As for the indirect effect, results showed that it did not vary depending on the values of need for cognitive closure.

## A CONTRIBUTE TO THE VALIDATION OF MULTIDIMENSIONAL JOB INSECURITY QUESTIONNAIRE – REVISED (MJIQ-R)

*Antonino Callea (Lumsa Università di Roma)*

The deep changes in the worldwide working labour market - also due to the last global financial crisis of 2008 and recently exacerbated by the current COVID-19 pandemic, led to a rising of subjective perception job insecurity. Job insecurity is classically distinguished in quantitative dimension, i.e., the fear of losing the job as a whole, and qualitative dimension, i.e., worries about losing valued job features. Each dimension may be described by an affective (concern, worry, or anxiety) or a cognitive facet (the perceived likelihood of negative changes to the job or the loss itself). The present study aimed to provide empirical evidences about the goodness of Multidimensional Job Insecurity Questionnaire - Revised (MJIQ-R). The MJIQ-R was composed by 20 items, well-balanced in terms of dimensions and facets. The sample was composed of 847 Italian employees from different organizations. Results of factor analysis well supported the two hypothesized dimensions, showing good fit indices. Furthermore, the multi-trait multi-method matrix supported good convergent and discriminant validity with other measures of quantitative and qualitative job insecurity. Therefore, MJIQ-R may be considered a valid and reliable measure for assessing quantitative and qualitative job insecurity.

## LIVING IN LIQUID TIMES: THE EFFECT OF JOB INSECURITY AND LIFE UNCERTAINTY ON PSYCHO-SOCIAL WELL-BEING AND LIFE-RELATED OUTCOMES IN THE TIME OF COVID-19

*Antonio Chirumbolo (Dipartimento di Psicologia, Sapienza Università di Roma)*

Contemporary society is characterized by a high level of uncertainty in many domains of everyday life. The COVID-19 pandemic has generated a global feeling of uncertainty and precarity, recently exacerbated by the war in Ukraine. Individuals with insecure jobs have (and will) suffered the most from this situation. Using Stress Theory and the Conservation of Resources Theory and as frameworks, the present study examines a SEM model with latent variables in which job insecurity and life uncertainty are expected to have a negative effect on well-being and on life-related outcomes, namely everyday consumptions (e.g., buying food, electric equipment) and planning broader life projects (e.g., buying a house, getting married). It was hypothesized that life uncertainty would exhibit a mediation role. The results of a mediation analysis showed that job insecurity and life uncertainty had a detrimental impact on individual well-being and quality of life, since they were significantly associated with higher distress, poorer mental health, higher propensity to reduce everyday consumptions and greater perceived unaffordability of planning broader long-term life projects. Results confirmed that life uncertainty mediates the influence of job insecurity on the outcomes.

## DOES JOB INSECURITY LEAD TO NEGATIVE JOB ATTITUDES, OR VICEVERSA? A CROSS-LAGGED STUDY ON THE MEDIATING ROLE OF PERCEIVED STRESS

*Alessandro Lo Presti (Università degli Studi della Campania 'Luigi Vanvitelli'), Assunta De Rosa (Università degli Studi della Campania 'Luigi Vanvitelli'), Margherita Brondino (Università di Verona)*

Due to increasing turbulences in the labour market, interest in job insecurity is growing as it is considered as a stressor associated with several individual- and organizational-level negative outcomes, however empirical evidence testing and contrasting alternative causation models is still lacking. Building on this consideration, this study aimed to examine the mediating role of perceived stress between quantitative job insecurity and job attitudes, i.e., organizational commitment, job satisfaction, work engagement, and turnover intentions, through a three-wave cross-lagged research design. In particular, we tested for alternative models of direct, reversed, and reciprocal causation. We sampled 347 Italian employees across three time points over a period of eight months and we analyzed results by means of structural equation modeling. Structural models showed better goodness of fit indexes when reciprocal causation was taken into account, except for turnover intentions for whom reversed causation fitted better the data. We contributed to the literature by showing the different, alternative, role of quantitative job insecurity, as a predictor but also as an outcome of job attitudes and perceived stress. Practical and theoretical implications were also provided and discussed.



## DO THE QUALITATIVE COMPONENTS OF JOB INSECURITY (COGNITIVE AND AFFECTIVE) DETERIORATE THE WORK-RELATED FLOW?

*Flavio Urbini (Università Europea di Roma)*

Several studies have well evidenced the detrimental impact of quantitative and qualitative job insecurity on health and well-being at work, but little is known regarding the qualitative dimension and on specific effects of its two components. Each dimension of job insecurity is characterized by a cognitive component, i.e. the likelihood of job loss or job features, or affective component, i.e. feelings of fear or worry about losing the job or job features. Based on a conservation of resources perspective, the present study aims to investigate the differential effects of affective and cognitive qualitative job insecurity on three-dimensions (absorption, work enjoyment and intrinsic work motivation) of flow at work. Participants were 185 employees. Variables was measured as follow: Cognitive and affective qualitative job insecurity by 10-item of Multidimensional Job Insecurity Questionnaire; Flow at work by 13-items of Work-Related Flow Inventory. Results showed that only cognitive qualitative job insecurity had negative and significant effects on absorption, work enjoyment and intrinsic work motivation. This study pointed out the differential effects of two components of qualitative job insecurity on flow at work as a desirable state for employee well-being.

# **E-CARE CARES!: CHALLENGES & FUTURE TRENDS TO INSPIRE STUDIES AND ACTIONS OF EARLY-CAREER RESEARCHERS AND PRACTITIONERS IN WORK AND ORGANISATIONAL PSYCHOLOGY**

*Proponente: Gabriele Puzzo (Università di Bologna)*

The Early Career Researchers' network (E-CARE) of the Work & Organizational Psychology (WOP) section of the Italian Psychological Association has proved to be a valuable resource, with passionate members creating working groups focusing on relevant WOP themes. In particular, in the last year E-CARE has worked on research topics that represent a current challenge or a future trend of interest for the field, aiming to share innovative theories, tools and practices with early-career researchers. The symposium aims to discuss the results of the E-CARE working groups by presenting five scientific contributions. First, the symposium brings an important update of the WOP state of the art by including two presentations on organizational change and virtual leadership literature reviews, respectively. Moreover, two presentations revolving around new research tools are proposed – one on new work-related stress assessment methods and one on a mixed method to investigate impostor syndrome. On the practitioner's side, a presentation on current and future wellbeing practices in academia is included. The symposium closes with an open discussion on these themes, ultimately to direct future research and to inspire early-career researchers' work.

## A “REVIEW OF THE REVIEWS” ON ORGANIZATIONAL CHANGE AND INNOVATION: STATE OF THE ART AND FUTURE PERSPECTIVES

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The last decades have witnessed an increasing interest of organizations in terms of technological innovation and change in work processes, in line with the demands of the Industry 4.0 and Organizational Change paradigm (Alase, 2017; Newman et al., 2019). Despite various literature reviews on this topic, however, definitions and practices that distinguish and characterize organizational change and innovation remain unclear. This contribution bridges this gap by reviewing the existing state-of-the-art literature reviews on the topic of Organizational Change & Innovation, distinguishing theoretical and experimental investigations of the phenomenon. The research team has extracted 502 reviews from Web Of Science and Scopus databases. Then, the papers were selected by reading the abstracts (resulting in 84 reviews). Risk of bias of individual studies was minimized by further selecting them according to various quality criteria (i.e. “Does the review provide an extensive description of the methodology?”), giving out a final number of 50 reviews. Expected results include a clear distinction and assessment of the difference between organizational change and innovation in terms of theories and applications, ultimately to provide new suggestions for research and practice.

## CHALLENGES, OPPORTUNITIES AND STRATEGIES FOR LEADERS IN MANAGING FACE-TO-FACE AND VIRTUAL TEAMS: A SYSTEMATIC REVIEW

*Andrea Caputo (Dipartimento di Psicologia, Università degli Studi di Torino), Valentina Dolce (Institute of Psychology, Université Lumière Lyon 2, France)*

Rapid technological innovations combined with the effects of globalization and the recent pandemic pushed organizations and managers into the practice of working in dispersed teams, switching between face-to-face and IT-mediated interactions. Although digital tools have become mainstream, less is known about the leadership strategies best suited to this transition. The primary purpose of this review is to summarize the current academic knowledge about challenges and opportunities for leaders in managing teams, identifying specific strategies employed by leaders to overcome the management of purely co-located or virtual teams. Following the new PRISMA-protocol, keywords and eligibility criteria were defined. The search performed in Scopus, Web of Science and EBSCO-host databases returned 1485 records. Once duplicates were removed (410), of the remaining 1,075 records, 58 peer-reviewed articles were eligible for inclusion. Data analysis is currently in progress. Final results will be presented during the conference thus contributing to the ongoing debate on and providing practical implications to virtual and face-to-face team management while identifying future research opportunities to advance knowledge in this field.

## NEW PERSPECTIVES IN WORKPLACE STRESS ASSESSMENT: FROM THE EXPOSURE TO PSYCHOSOCIAL HAZARDS TO THE PROLONGED ACTIVATION AFTER WORK

*Luca Menghini (Dipartimento di Psicologia, Università di Bologna)*

Over the last decades, robust theoretical frameworks have been provided to identify the main psychosocial job characteristics (job stressors) impacting on employees' health and wellbeing (job strain), resulting in normative actions (e.g., Italian law on health and safety at work) that highlight the recommended methodology to assess and manage workplace stress. Yet, the dominant theories and the resulting best practices are based on the Reactivity Hypothesis that stress mainly impacts on health due to the magnitude of short-term responses during the exposure to job stressors. In contrast, recent theoretical advancements (Perseverative Cognition Hypothesis) questioned the importance of short-term reactivity, identifying prolonged activation after and before the exposure (i.e., during non-work time) as the core pathogenic aspect of stress. Here, I present the data collected from two empirical studies, a cross-sectional survey involving 787 healthcare professionals, and a multimethod 10-day diary study involving 100 office workers, to illustrate the difference between the traditional approach to workplace stress assessment and more recent approaches accounting for prolonged activation. Theoretical perspectives and implications for routine assessment and interventions are discussed.

## YOU'RE WORTHY OF IT! – AN EXPLORATION OF IMPOSTOR SYNDROME PHENOMENON AMONG ITALIAN DOCTORAL STUDENTS

*Annalisa Soncini (Università di Bologna), Gerardo Petruzzello (Università di Bologna), Giuliano Tomei (Università di Bologna), Paola Castellano (Università di Bologna)*

Impostor Syndrome (IS) is a threat to the mental health of doctoral students who may experience a sense of inadequacy and self-doubt. We aimed to investigate this phenomenon in an Italian doctoral student to understand its relationships with other relevant variables. We collected qualitative and quantitative data using a convergent parallel mixed-method design. Participants (N = 215) completed an online survey, including an open-ended question on demanding aspects of the PhD and psychometric scales to measure the self-report Impostor syndrome, supervisor support, self-efficacy, and mental health (i.e., burnout and psychological well-being). A moderated mediating model, based on the Job Demands-Resource Model, suggested that self-efficacy and supervisor support interact to reduce IS and, in turn, enhance mental health. Additionally, through the thematic analysis of qualitative responses, we delved into participants' distress related to the lack of supervisor support and constant feelings of incompetence. These results support the joint importance of specific personal and contextual resources to counteract the IS impact among doctoral students. Our findings may inform tailored interventions to improve the doctoral experience and support doctoral students' quality of life.

## GOOD PRACTICES FOR PHDS WELL-BEING: OVERVIEW AND FUTURE DIRECTION

*Luca Radassao (Università di Bologna), Sara De Sio (Università di Bologna)*

In this contribution, we discuss a series of good practices to improve well-being in Academia. We focused our work on doctoral students and their work conditions, as recent literature shows this population to be at increased risk of psychopathology and psychological distress associated with their work environment. Specifically, we will discuss those factors that have been observed to exert the greatest toll on the psychological well-being of doctoral students, such as relationships with tutors, work-life balance, and specific workplace dynamics in general. In this presentation, first, we'll briefly discuss existing literature on this topic, then we'll present which actions have been taken by public institutions, student associations and universities to contrast this issue. For each action, we'll describe which psychological factor was implied and why this type of activity can empower PhDs. In the end, we propose a series of potential actions based on existing good practices and WOP evidence. This contribution can be a good example of how a WOP approach, that uses its own tools theories and practice, can help policymakers to improve well-being in a specific and near listener environment.

# HEALTHY ORGANIZATIONS: RESOURCES AND CHALLENGES

*Proponente: Annamaria Di Fabio (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

The current world of work is characterized by instability and insecurity, threatening the well-being of individuals (Blustein, Kenny, Di Fabio, & Guichard, 2019). It is essential to promote healthy organizations (Di Fabio, Cheung, & Peiró, 2020) in strength-based prevention perspectives (Di Fabio & Saklofske, 2021) to reach positive outcomes for workers, group and organizations. Healthy organizations are characterized by culture, climate and practices aimed at promoting both well-being of workers and effectiveness of organizations, also considering healthy business (Di Fabio, 2017; Guglielmi et al., 2019). This symposium includes four contributions. The contribution by Palazzeschi and Di Fabio is focused on gratitude in organizations, proposing a Short Version of the Gratitude Resentment and Appreciation Test. The contribution by Gori and Topino examines the mediation role of career adaptability in the association between self-esteem and meaning in life. The contribution by Svicher and Di Fabio presents an Item Response Theory analysis of the Big Three Perfectionism Scale–Short Form in Italian workers. The contribution by Mazzetti, Simbula, Pische, Çetin, Guglielmi presents a diary study on the relationship between demands, resources and work outcomes in healthcare workers.



## GRATITUDE IN ORGANIZATIONS: A SHORT VERSION OF THE GRATITUDE RESENTMENT AND APPRECIATION TEST

*Letizia Palazzeschi (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Annamaria Di Fabio (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

In a healthy organizational framework (Di Fabio, 2017; Di Fabio, Cheung, & Peiró, 2020) and strengths-based prevention perspectives (Di Fabio & Saklofske, 2021) gratitude represents a promising resource in the organizational field. Gratitude is a worthy construct as it promotes positive relationships, social support and worker well-being, reducing negative emotions in the workplace and increasing the well-being of workers and organizations. Gratitude also emerges as a variable of interest in relation to efficiency, success and productivity in organizations. Gratitude can be increased through specific training. Gratitude is therefore recognized as a significant resource for both individuals and organizations (Di Fabio, Bucci, & Palazzeschi, 2017). This study aims at analyzing the psychometric properties of a Short Version of the Gratitude Resentment and Appreciation Test. Participants were 464 workers. Dimensionality, reliability, and concurrent validity were analyzed. Confirmatory factor analysis supported a three-dimensional version of the scale. Good internal consistency and concurrent validity were established. Results indicate that this Short Version of the Gratitude Resentment and Appreciation Test is a valid instrument for measuring gratitude in the Italian context.

## THE ASSOCIATION BETWEEN SELF-ESTEEM AND MEANING IN LIFE: THE PARALLEL MEDIATION OF THE CAREER ADAPTABILITY COMPONENTS

*Eleonora Topino (Dipartimento di Scienze Umane, Lumsa Università di Roma), Alessio Gori (Dipartimento di Scienze della Salute, Università degli Studi di Firenze)*

In line with the perspective of healthy organizations, the concept of the meaning in life in workers' life acquires a role of increasing importance, given its role in favour of both individual and organizational well-being. The present study aimed at exploring the factors that may be associated with meaning in life, by focusing on self-esteem and the career adaptability components (curiosity, concern, control, and confidence). The study involved 425 Italian participants ( $N = 312$ ;  $M_{age} = 39.2$ ,  $SD = 15.20$ ), who filled out a self-report survey including the Rosenberg Self-esteem scale, Meaning in Life Questionnaire, and the Career Adapt-Abilities Scale. Results confirmed a significant and positive total effect in the relationship between self-esteem and meaning in life ( $\beta = .53$ ,  $p < 0.001$ ;  $LL = .3639$ ,  $UL = .4943$ ). Furthermore, significant mediation effects were identified for curiosity, concern, and control, but not for confidence, such that when these variables are included in the model the association between self-esteem and meaning in life is reduced, albeit always significant ( $\beta = .32$ ,  $p < 0.001$ ;  $LL = .1853$ ,  $UL = .3226$ ), indicating a partial parallel mediation. Such data may provide useful indications for research and intervention in several job contexts.

## THE BIG THREE PERFECTIONISM SCALE–SHORT FORM (BTPS-SF): AN ITEM RESPONSE THEORY ANALYSIS IN ITALIAN WORKERS

*Andrea Svicher (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Annamaria Di Fabio (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

The present study has conducted a psychometric analysis grounded in Rasch item response theory (IRT) models, which have not been applied to the BTPS-SF, yet. Italian Workers, 401 in all (Mage = 46.78; SD = 10.1; Male = 48.9%; Female = 51.1%) were assessed via the BTPS-SF. We run Confirmatory Factor Analyses of BTPS-SF and IRT analysis using the Generalized partial credit model (GPCM) and Mokken scale analysis. Discrimination and difficulty parameters were calculated. Loevinger coefficient of scalability was computed. Item Characteristic Curves (ICC), Test Information Function (TIF) and Differential Item Functioning (DIF) for gender was calculated. A Three-factor solution revealed the best fit. Thus, IRT analyses were performed for each BTPS-SF factor: rigid (RP), self-critical (SP), and narcissistic perfectionism (NP). All the items showed Loevinger coefficients from medium to strong, and discrimination parameters from medium to very high. No DIF for gender was found. The Big BTPS-SF shows good psychometric properties for Italian workers. Future studies are needed to explore findings in Workers from different countries.

## HEALTHY HEALTHCARE WORKERS DURING THE COVID-19 PANDEMIC? A DIARY STUDY ON THE RELATIONSHIP BETWEEN DEMANDS, RESOURCES AND WORK OUTCOMES

*Greta Mazzetti (Dipartimento di Scienze dell'Educazione, Università di Bologna), Silvia Simbula (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Edoardo Pische (Dipartimento di Scienze dell'Educazione, Università di Bologna), Mehmet Çetin (Dipartimento di Scienze dell'Educazione, Università di Bologna), Dina Guglielmi (Dipartimento di Scienze dell'Educazione, Università di Bologna)*

Healthcare workers were on the frontline in tackling adverse conditions compelled by the pandemic. Increased job demands and reduced job and personal resources caused critical adverse outcomes, such as intensified PTSD and burnout and jeopardized work engagement. Research on the links between demands, resources and work outcomes during the pandemic is scarce. In line with the JD-R framework, the present study aims at analyzing the associations among daily job demands (effort, work-family conflict) and resources (resilience, peer support, and equity), and day-level work outcomes (engagement, burnout, and PTSD). A sample of 85 healthcare professionals (62.4% women; 31.8% nurses) completed a diary booklet over 5 consecutive workdays. Overall, 351 day-level responses were nested in persons. Using HLM software, preliminary analysis justified the multilevel structure of the study as there was substantial variance in both intra and inter-individual levels. Multilevel analysis revealed that effort was positively linked with both work engagement and burnout and indicated a negative association between resources and adverse work outcomes (burnout and PTSD). The study provides a day-level perspective of the JD-R framework applied to healthcare professionals during pandemic conditions.

# THE ROLE OF COMPASSION IN PROFESSIONS WITH A HIGH RELATIONAL CONTENT

*Proponente: Ilaria Buonomo (Lumsa Università di Roma)*

Professions with a high relational content (e.g., healthcare professionals, teachers) are characterized by intense involvement in users' physical, psychological, social, or educational needs (Graf et al., 2014). Moreover, the pandemic further intensified this feature. Thus, the need to individuate promotional and protection strategies to support employee performance and well-being emerges. Compassion at work (CAW) is particularly relevant to operationalizing relationships at work and their protective effect. CAW refers to noticing when others are suffering or in trouble, understanding their reasons, empathizing with them, and choosing appropriate actions to reduce their negative emotions (Atkins and Parker, 2012; West and Chowla, 2017). Research on CAW in healthcare organizations showed CAW's influence on employees' well-being and productivity, patients' health and satisfaction, and organizational performance (Trzeciak and Mazzaelli, 2019). Despite such advantages, CAW is still poorly explored within Italian organizations and worldwide within non-healthcare-related contexts. This symposium aims to start a shared reflection to fill this gap, providing a review of the state of the art on CAW and sharing research data gathered in Italy through qualitative and quantitative methods.

## ANTECEDENTS AND OUTCOMES OF COMPASSION AT WORK: A SYSTEMATIC LITERATURE REVIEW

*Martina Pansini (Dipartimento di Scienze Umane, Lumsa Università di Roma)*

Compassion is an interpersonal process involving the ability to notice the suffering of the other, to emphatically feel the pain, and to act appropriately in the context to alleviate it or help to cope with it. In the organizational context, this topic, called Compassion at Work (CAW), responds to the growing significance of relational perspectives at work, in consideration of the influence of relationships on work experiences, and employee identity and well-being. Although CAW is commonly studied in helping professionals, it has recently been applied in other organizational contexts. The present literature review systematizes the research contributions on CAW published between 2008 (the debut year of the topic in the literature) and 2022. The available research refers mainly to healthcare organizations. Despite this, there has been recently a greater diffusion also in other types of organizations (e.g., education, services). Overall, it is possible to distinguish three levels of CAW: self-compassion; given compassion; received compassion. Thus, the antecedents and the outcomes of each level will be described, as well as the factors that facilitate or hinder its expression. Finally, the theoretical and applicative implications of the results will be discussed.

## COMPASSIONATE LEADERSHIP. A TERM ISSUE?

*Sara Cervai (Università di Trieste), Martina Zorzetti (Azienda Sanitaria Universitaria Friuli Centrale), Maura Galletta (Università di Cagliari), Michela Cortini (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The present study, within the framework of compassionate leadership (West, 2021), investigates the meanings of CAW (Compassion at Work) in healthcare management. Through a deep interview with 10 managers belonging to a healthcare organization, we investigated their knowledge on CAW and the value of the competencies they acquainted during formal training and organizational socialization. The sample covers different managerial roles; interviews have been recorded, transcribed and analysed, both in qualitative and quantitative terms. According to results, CAW refers to empathy, focusing on people, and it is expressed primarily by clinical sector, including both physicians and nurses, while it remains a challenge for administrative employees. Despite to a poor knowledge of “compassionate” as term to indicate “a way to take care of the other”, the contents of CAW are well known in caring practices, less in managerial attitudes. Notwithstanding, it arises the power of CAW in developing team building and prevent burnout. In different terms, according to the participants, CAW can impact not only on professional performance but also in workers wellbeing; in such a sense, the target of compassionate leadership emerges as being double: patients and their families as well as employees.

## COMPASSIONATE LEADERSHIP BETWEEN TRAINING AND PRACTICE. A PILOT STUDY

*Teresa Di Fiore (Università degli Studi G. d'Annunzio di Chieti-Pescara), Giovanni Ursolo (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The present study, within the framework of compassionate leadership by M. West, investigates how the training in Italian nursing university courses is managed and its effects in terms of compassionate leadership culture. The pilot research consists of 2 different studies. In the first we have analysed the didactic proposal of each singular academic course in nursing bachelor and Master degrees in order to verify how much space is dedicated to themes concerning, in a way or another, the compassionate leadership. In the second study we have interviewed a sample of 20 nursing internees to verify their social representations of compassionate leadership and the usefulness of the training received during university. The first study's results underline that few space is still dedicated to compassionate leadership in Italian courses of nursing, especially in comparison to what happens in different European countries. For what concerns the second study, it emerges the importance of empathy, especially meant in a very proactive way, and, at the same time, the urgency to stress the active role that compassionate leadership should promote, even if it emerges an ambiguity in professional terminology between compassionate leadership and pietism which calls for further cultural interventions.



## THE LINK BETWEEN COMPASSION AT WORK AND LIFE SATISFACTION IN TEACHERS. EXPLORING THE ROLE OF PERCEIVED COLLECTIVE SCHOOL PERFORMANCE AND BURNOUT

*Ilaria Buonomo (Lumsa Università di Roma), Paula Benevene (Lumsa Università di Roma)*

Receiving compassion at work (CAW) benefits personal and work well-being and reduces negative beliefs and conditions (e.g., burnout, low efficacy). Such effects are crucial for teachers, considering the heterogeneous web of relationships and interactions that characterizes their job role (Pereira et al., 2015). This contribution explores the role of perceived collective school performance and burnout in the link between received CAW and life satisfaction in a sample of 136 Italian teachers (mean age=48.46, SD=9.46, females=85.4%) working in primary and secondary schools. Data were gathered through an anonymous protocol, formed by validated tools, and analyzed with a structural equation model. The final model showed a good fit to the data  $\chi^2(21)=30.716$ ,  $p=.08$ , CFI=0.989, TLI=0.981, RMSEA=0.050 (90% CI=0.000–0.080,  $p=.465$ ), SRMR=0.038. More specifically, findings showed that received CAW was significantly associated with life satisfaction (bDIRECT=.239, $p=.007$ ), and perceived performance partially mediated this link (bINDIRECT=.230, $p=.000$ ), while burnout did not (bINDIRECT=ns). Overall, the model explained the 42% of life satisfaction. The oral contribution will deepen the practical implications of such findings regarding potential applications for school management strategies.

# **CAREER MANAGEMENT & JOB INSECURITY**

## HAVING A CALLING DURING UNIVERSITY-TO-WORK TRANSITION: ANALYSES OF CHANGES IN CAREER CALLING AND CALLING MOTIVATION

*Anna Dalla Rosa (Università degli Studi di Padova)*

Career calling is a pervasive, purposeful and passion-driven engagement in a life domain that individuals feel called to pursue, for which they are willing to make sacrifices, that contributes to the greater good and to individuals' identity. Even if empirical investigations about calling are growing fast, whether and how calling changes during key transitions throughout a person's working life is currently an open question. In a two-wave study involving 1,082 college students, we analyzed how calling and motivation to pursue one's calling changes during university-to-work transition. This study showed that calling decreases only in students who are entering the job market. On the contrary, their motivation to pursue their calling is stable during university-to-work transition, and higher when entering the job market. Workers have a lower level of calling and lower motivation to pursue one's calling than students. Future development and theoretical and practical implication of these results are discussed.

## BOUNDARYLESS CAREER ORIENTATION AS A KEY TO MANAGE INSECURITY

*Elisa De Carlo (Dipartimento di Scienze Dell'Educazione 'Giovanni Maria Bertin', Università di Bologna), Carlos María Alcover (Universidad Rey Juan Carlos, España), Eva Derous (Department of Work, Organisation and Society, Ghent University, Belgium)*

The growing demand for flexibility and adaptation in the workplace put in evidence the need to look at the context with a different perspective to identify new resources and strategies. This study aims to explore the role played by workers' job crafting and career competencies (such as knowing why, knowing how, and knowing whom) in the relationship between boundaryless career orientation and work-related outcomes such as work engagement and perceived job insecurity. A sample of 764 Italian employees taking part in the study by completing an online self-report questionnaire. Results of the bootstrap models with multiple mediators operating in series confirmed the hypotheses that career mindset was negatively related to job insecurity and positively related to work engagement through the mediation before of job crafting and then of career competencies. The current study was based on self-reported data, the sample was characterized as heterogeneous. A further limitation lies in the use of cross-sectional data. Research suggests insights to encourage potential intervention strategies aimed at improving employees' skills and, consequently, increasing their level of commitment and decreasing job insecurity in an unpredictable and ever-changing labor market.

## A HARD DAY'S NIGHT: A DYNAMICAL MODEL OF MUSICIANS' CAREER CHOICES

*Ugo Merlone (Dipartimento di Psicologia, Università degli Studi di Torino), Irene Alfarone (Dipartimento di Psicologia, Università degli Studi di Torino)*

The music labor market is a highly competitive one, characterized by an oversupply of professionals, several forms of temporary employment and employment uncertainty (Menger, 1999). Many musicians that experience these conditions decide to abandon their artistic career in favor of more remunerated or stable one. Starting from a well renowned model of cultural goods' production (Borowiecki, 2015), we propose a simple career choice model, following the work of Bischi and colleagues (2009), in which musicians can switch from a musical to a non-musical career and vice-versa and their choice is influenced by their peers. The model shows three possible scenarios: One, theoretical, with no musicians, another with the possibility for almost every musician to embrace an artistic career, and a final one that shows that musical occupation follows cycles. From the analyses emerge that the career choices depend on the city's musical appreciation, the presence of a network of musicians for psychological support and job opportunities, the propensity to switch choice from a career to another, and the reservation utility level of artists. Finally, the model showed that the musicians' communities are fragile and several parameters have to be monitored when analyzing the careers' sustainability.

## CAPITALISE ON THE MOMENTUM! – A CROSS-LAGGED ANALYSIS OF THE RECIPROCAL RELATIONSHIP BETWEEN PERCEIVED EMPLOYABILITY AND PSYCHOLOGICAL WELL-BEING AMONG NEW ENTRANTS IN THE LABOUR MARKET

*Gerardo Petruzzello (Università di Bologna), Jeroen P. De Jong (Radboud University, Netherlands),  
Beatrice I. J. M. Van Der Heijden (Radboud University, Netherlands)*

Research about early careers recognises that perceived employability (PE) is essential for a sustainable transition to work, as portrayed, for instance, by its positive effect on psychological well-being (PWB). Building on the gain spirals' principle of the Conservation of Resources theory, this study extends the literature about PE by testing the reciprocal effects between PE and PWB. We hypothesised that PE predicts PWB (H1), that this relationship also works the other way around (H2) and that there is a gain spiral where PE and PWB reciprocally influence each other over time (H3). We conducted a three-wave cross-lagged study involving 376 Italian new entrants in the labour market (i.e., university students and graduates), with a time lag of three months. We used the structural equation modelling approach to test the cross-lagged relationships and found that our hypotheses were confirmed. Due to the longitudinal design, this study represents a valuable addition to PE research among new entrants. Moreover, the evidence of a bi-directional relationship extends PE theory. For practitioners (e.g., within Universities), our findings suggest that investing in the development of both PE and PWB pays off, as it promotes positive gain spirals and a sustainable transition to work.

## RELATIONSHIPS BETWEEN SELF-EFFICACY, JOB INSTABILITY, DECENT WORK, AND LIFE SATISFACTION IN A SAMPLE OF ITALIAN, SWISS AND SPANISH STUDENTS

*Andrea Zammitti (Università di Catania), Jenny Marcionetti (Scuola Universitaria Professionale della Svizzera Italiana), Soledad Romero Rodriguez (University of Seville, Spain), Celia Moreno Morilla (Universidad de Sevilla, Spain), Giuseppe Santisi (Università di Catania)*

Studies have shown that self-efficacy has a positive impact on life satisfaction and the idea of being able to find a decent work. On the other hand, the perception of job instability is negatively related to these dimensions. Few authors have investigated these constructs within the same study. Our aim was to verify a mediation model in which the idea of being able to find a decent work in one's region could mediate between perceived self-efficacy in one's training and life satisfaction, and between perceived instability of the profession for which one is training and life satisfaction. University students ( $n = 386$ ) from three different countries participated in this study: Italy ( $n = 131$ ), Switzerland ( $n = 135$ ) and Spain ( $n = 120$ ). Participants completed a research protocol to assess the dimensions of the study. Results partially confirmed our model, showing that the idea of finding a decent work in one's own context fully mediates the relation between perception of job instability and life satisfaction, but not between self-efficacy and life satisfaction. Perceived self-efficacy, together with the idea to find a decent work, have a direct effect on life satisfaction. Implications for professional practice will be discussed.

# LEADERSHIP



## EFFECT OF LONG-TERM ISOLATION IN SIRIUS-21 ON CREW INTERPERSONAL NETWORKS

*Leslie Dechurch (Northwestern University, USA), Alina Lungeanu (Northwestern University, USA), Joy Liebman (Northwestern University, USA), Noshir Contractor (Northwestern University, USA)*

Crews venturing into deep space need to develop and maintain positive working relationships for an extended period of time, while enduring extreme isolation from typical sources of social support. Applying social network and team theory, we explore the effect of isolation on three topological aspects of teams found to predict their capacity to perform effectively: (1) the level of interconnectedness among the crew, (2) the degree to which the crew shows hierarchy, and variation on status, position, or power, and (3) the extent to which the crew shows subgrouping among members. We observed three teams together for 8 months to understand developmental patterns in crew relations, and how isolation affects these patterns. Team one was located in Moscow in the SIRIUS-21 mission. The second and third teams were “twinned” to SIRIUS, matching their diversity. The key difference was that SIRIUS lived in isolation and the twin teams did not. Their networks were tracked using surveys of: leadership, motivation, coordination, and hindrance. Network metrics include density, centralization, components, and isolates. This study advances work on teams exploring developmental trajectories of networks, and how they are affected by social isolation.

## CAREER CALLING AND LEADER MEMBER EXCHANGE

*Sophie Gerdel (Università degli Studi di Padova), Michelangelo Vianello (Università degli Studi di Padova)*

Calling is the ultimate subjective experience of career success. Yet, little is known on how a calling originates. By exploring the leader-follower relationship, we attempt to explain the underlying mechanism of how and when both leaders and followers have an influence on the perception of being called toward their jobs or careers. Based on Social Exchange Theory, we hypothesized that leader-member exchange (LMX) fully mediates the relation between leader's and follower's calling and predicted that perceived supervisor support (PSS) partially mediates the relation between leader's calling and LMX. Results of a multisource study on Italian employees/managers dyads (N= 373) partially supported this prediction. We observed that PSS increased the positive relation between leader's calling and LMX. The more a manager is called, the more the follower perceives a high-quality reciprocal relation. This study informs on how calling influence leaders' effectiveness and on how calling develops in employees.

## THE LEADERSHIP–ERROR CULTURE CONNECTION: AN EXPLORATORY STUDY ON NEGATIVE LEADERSHIP STYLES

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Errors are common within organizations and an adequate error culture is pivotal to preventing errors and learning from them. Leaders are acknowledged as the most influential actors in organizations to shape their culture, hence our aim is to examine how different leadership profiles can influence error aversion (EAC) and error management (EMC) cultures. We reached 388 employees (48.7% females). An ESEM model was run to assess the factorial structure of the leadership scales and a Latent Profile Analysis (LPA) was used to examine leadership profiles, showing four profiles: positive (POS), corrective-abusive (CAB), passive (PAS) and passive-abusive (PAB). Regressions to investigate leadership profiles' relations with different error cultures showed that negative leadership profiles (CAB, PAS and PAB) were negatively associated with EMC ( $R^2=.17$ ), and positively associated with EAC ( $R^2=.24$ ), also showing specific effects related to EAC's components. Our findings suggest that when leaders are abusive and laissez-faire, employees tend to cover errors and feel strained from them; conversely, they are discouraged to communicating their errors and learning from them. Cross-sectional data and a general sample suggest additional research.

## BEING SELFISH DOES NOT BENEFIT THE SELF: A MODERATED MEDIATION MODEL OF EMPLOYEE SELF-INTEREST AND TURNOVER INTENTIONS

*Valentina Sommovigo (Sapienza Università di Roma, Dipartimento di Medicina e Psicologia), Francesco Montani (Dipartimento di Scienze Aziendali, Università di Bologna), Raffaele Staglianò (Dipartimento di Economia, Università degli Studi di Messina)*

Today's knowledge-based economy makes retention of employees and knowledge vital for firms' competitive advantage. However, some employees may decide to intentionally withhold knowledge that others have requested, which eventually results in increased turnover intentions. This study aims to clarify to what extent, and when employee self-interest is positively related to knowledge hiding and then turnover intentions. Drawing on the social exchange theory, we predicted that the link between self-interest and turnover intentions would be mediated by knowledge hiding and moderated by ethical leadership. To test our hypothesis, we conducted a three-wave study on 235 employees from UK and U.S. firms. Consistent with our predictions, path analysis results supported the mediating role of knowledge hiding. Moreover, ethical leadership buffered the indirect link between self-interest and turnover intentions via knowledge hiding, so that self-interested individuals were less likely to engage in knowledge hiding and to manifest turnover intentions when ethical leadership was high (versus low). Our findings enhance current understanding of the person-level predictors of knowledge hiding and offer new insights into how leaders can prevent selfish employees from engaging in knowledge hiding.

## THE QUALITY OF WORKING LIFE OF THE ROLE OF MAYOR: A QUALITATIVE RESEARCH

*Lucia Traverso (Dipartimento di Scienze della Formazione, Università di Genova), Andreina Bruno (Dipartimento di Scienze della Formazione, Università di Genova), Sara Viotti (Dipartimento di Psicologia, Università degli Studi di Torino)*

Work-related stress and leadership interaction have been central in psychological research. According to several studies, having a leadership role increases stress levels (Campbell, 2006). Nevertheless, these themes are poorly explored for the political and administrative leadership. We aimed to investigate the strategic levers that support the Local Authority's activity, with a particular focus on the mayor's role. In total, 30 mayors of small and medium-sized municipalities, with a resident population of fewer than 20,000 inhabitants, were interviewed. Data were analyzed using the Template Analysis (King, 1998), by referring to the three-level hierarchical model (Schaufeli, 2004), adapted to the local government's context: macro-level or superordinated context, meso-level or municipal context, and micro-level or work context. Results showed greater support at the work context level and a sense of abandonment and loneliness at the superordinated context level. Work satisfaction is related primarily to the municipal context level. Furthermore, the findings reveal a significant work-life conflict. Data allow for the identification of criticalities and strategic levers for the quality of working life of local governments.

# **SMART WORKING & WELL-BEING IN SCHOOL**

## ORGANIZATIONAL SOCIALIZATION AND ONBOARDING MANAGEMENT IN THE REMOTE WORKING ERA: NEW REQUIREMENTS FOR PEOPLE MANAGEMENT

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Stefano Livi (Sapienza Università di Roma)*

The study wants to give an overview on the onboarding process and on its changes due to environmental innovation: remote working, agile working, digitalization, sustainability. With organizational socialization, we refer to a process where the new-comer and the group mutually affect one other. We indicate onboarding as all tools that help the newcomer's socialization in the company. Integrating a new team member implies a moment of negotiation and change. Main goal of the project is boosting the people management practices in the remote working era. A survey run on 1166 new hired participants, divided in 3 international clusters, showed that a new Digital Culture is growing, standardizing the general way to behave in a company. Despite this new Digital Culture, a traditional way to focus on performance or networking confirms and reinforces geographical differences. This study opens up different scenarios in terms of new practices. The organizational world will need to overcome the challenge of integrating traditional organizational instances with new digital culture and working methods. A gradual change is crucial to prevent mismatching in terms of human resources management. To improve further managerial techniques, the study conducted interviews HR Managers.

## FROM 'HOME DESK' TO 'HOT DESK' AGAIN: THE IMPACT OF COVID-19 ON COWORKERS WORKING HABITS

*Gabriella Francesca Amalia Pernice (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Valeria Orso (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Luciano Gamberini (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

A coworking space is a place in which diverse professionals doing different jobs share an open space office organized to accommodate various needs. In Italy the popularity of these spaces was increasing before the Sars-CoV-2 pandemic outbreak in 2020. This study aimed to explore whether and how the COVID-19 impacted on the work practices of the coworkers. We investigated the professional profiles of the attenders of different coworking spaces (N=20; M=16, F=6) and their working routines after the first lockdown. To this end, a series of semi-structured interviews were conducted and subsequently transcribed. Results indicate that despite the health risks related to COVID-19, coworkers wanted to return to these spaces, where they could find a network of mutual support with other professionals and feel part of a community. Moreover, coworking was found to help balancing professional and private lives. Our preliminary findings indicate that the initial excitement linked to the opportunities of smart working may not translate into a permanent change of the working habits, as the downsides may exceed the benefits. They also suggest that coworking spaces are gaining a relevant role in changing the working habits of employees, regardless of their age and profession.



## TEACHERS' WORK-RELATED WELL-BEING IN TIMES OF COVID-19: THE EFFECTS OF TECHNOSTRESS AND DISTANCE LEARNING

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Following the outbreak of the COVID-19 pandemic, one of the first measures implemented in Italy was the transition from frontal teaching to e-learning. The sudden need to use technologies to perform their job has added a source of stress to teachers' work, the so-called technostress. The difficulties experienced in this transition may also have affected the perception of work-related well-being, although other variables, such as the perception of the meaningfulness of work, could alleviate this sense of uneasiness. The study aims to examine the relationships between technostress, distance learning, pleasure in working and meaningful work perceptions among 219 teachers from different school grades through a moderated mediation model. The results confirmed negative associations between technostress and pleasure in working, although this relationship varied according to the levels of perceived meaningfulness. Analyzing the factors related to teachers' perceptions of their work, both in general and during the pandemic situation, is useful for tracing new coping strategies and planning interventions to implement new teaching methods. Further implications concern the protective role of meaningful work, and the low attention given to this aspect, in Italy, in the selection of teachers.

## SCHOOL PRINCIPALS' WELL-BEING AND HEALTH PROMOTION DURING THE COVID-19 PANDEMIC

*Veronica Velasco (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Chiara Lorini (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Patrizio Zanobini (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Stefano Delbosq (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Guglielmo Bonaccorsi (Dipartimento di Scienze della Salute, Università degli Studi di Firenze)*

The COVID-19 pandemic had a huge impact on schools. However, a limited amount of research has explored its effects on school principals. The literature showed that school leaders report high levels of job stress and they play a key role in activating health promotion strategies for teachers and students. The international COVID-HL School Principals Survey aimed to investigate the stresses and strains that school principals experience and the health promotion measures implemented in schools during the pandemic. A self-report questionnaire was administered to 767 Italian school principals. The questionnaire has been disseminated by school principals' associations (ANP and ANDIS) and by the Lombardian Regional School Office. The participants reported low levels of satisfaction (only 42.7% were satisfied) and high levels of stress (mean=3.35; ds=.77; the 69.6% felt fairly or very often nervous and stressed at work). On the contrary, they reported high self-efficacy levels in managing their work (mean=3.28; ds=.61). The relationship between work stress and health promotion strategies implemented during the COVID-19 pandemic will be presented. Results showed the importance of considering school principals' wellbeing and stress and the effects on the whole school organization.

# WORK & TECHNOLOGY 1

## FACING THE E-WASTE CRISIS WITH HUMAN FACTORS – A HIERARCHICAL TASK ANALYSIS AND HUMAN RELIABILITY ASSESSMENT TO IMPROVE E-WASTE MANAGEMENT IN AN ITALIAN MULTI-SERVICE COMPANY

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The growth of the technological industry and the promotion of digitalization have caused an ongoing e-waste crisis, with 74.7 million tons of e-waste produced by 2030 (Forti et al., 2020). Despite the consequent growing relevance of e-waste management (EM), EM systems are not catching up – largely failing to handle e-waste properly (Parajuly et al., 2020). Based on human factors theories and applications, this contribution describes an organizational assessment to improve EM practices within a multi-service waste management company. First, a Hierarchical Task Analysis (Ajzen, 1991) was conducted to structure and identify critical EM tasks. Moreover, Human Reliability Assessment integrating SPAR-H and HEART methodologies (Guglielmi et al., 2021) is implemented to compute the Human Error Probability (HEP) in EM tasks. In both cases, data are collected through semi-structured interviews, direct observations and survey administrations in four different waste collection centers and in two administrative areas, involving 30 participants. Foreseen results include a hierarchical distinction of tasks in collection center work environment, as well as associated HEP. Results will direct organizational interventions aimed at improving EM practices (i.e. training, nudging).

## EXTENDING THE TOOLBOX: A DIGITAL USER MANUAL TO ENHANCE THE WORK OF AUTOMATION TECHNICIANS

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Installing automation systems is a complex work, requiring to coordinate several activities, while attending at the instructions, which are typically reported in small fonts and pieces of information are not logically grouped. This study aimed to design a digital tool to support technicians while installing automations. Observations in the field were conducted, where operators' work was video-recorded and systematically analyzed offline (N=6 experts; N=6 non-experts). Technical experts from a leading manufacturer of automations were involved in co-design activities to elaborate a workflow of the ideal installation. Results informed the design and development of an app with illustrative images of key assembly steps, animated sketches, and minimum text. A preliminary test was run to assess the usability of the app. A new sample (N=3 experts; N=4 non-experts) installed an automation following the indications on the app. Performance data (time, frequency of consultation, breakdown-analysis) were assessed with computer-supported video-analysis. Self-reported data investigating usability, experience of use and acceptance were collected. The app was well-received and proved to be an effective tool, as all users accomplished the task unaided.

## INDUSTRY 4.0 IN THE KITCHEN: A USER-CENTERED DESIGN AND EVALUATION OF A CONNECTED PROFESSIONAL KITCHEN

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Professional kitchens are hectic working environments, where the work of several professionals interacting with machines needs to be carefully coordinated. Additionally, operators have to interact with sophisticated and complex machinery to prepare and preserve food. In the present work, we present a system that connects professional machines for food preparation and preservation, aimed to optimize machine usage during the preparation of food, thereby helping the user with predictive maintenance, and improving resource management. The system, featuring also a mobile app, was developed with an employee-centred approach. Users (N= 18 in total) were involved firstly with observations in the field, to understand the work practices. Next, they participated in co-design sessions to discuss different prototypes for the mobile app. The final prototype was tested in a laboratory-based professional kitchen. Our outcomes suggest that the system relieves the chef from the execution of routine tasks (e.g., machine settings), reducing the number of errors related to the use of professional machines. Participants reported that the system will be helpful especially to support less experienced operators not to focus on repetitive actions, rather on the food, thereby improving their skills.

## WORKING INTERDISCIPLINARILY: A QUALITATIVE METHODOLOGY TO DERIVE ENGINEERING REQUIREMENTS IN KNOWLEDGE INTENSIVE ACTIVITIES

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This contribution shows an interdisciplinary study in which work/organisational psychology & human factors scholars collaborated with mechanical engineering academics and experts to derive needs and engineering requirements for design configuration tools. Requirements engineering is the process of identifying user and stakeholder needs, and consequently eliciting, analysing, specifying, and validating systems requirements. Scholars and practitioners agree that every phase of the process faces critical challenges that may compromise the system's success, if not effectively addressed. Indeed, literature reports systems failures caused by numerous factors around requirement engineering activities. This study illustrates how the multidisciplinary research team was challenged to think 'outside-the-box' and 'across boundaries' to derive a three stage, qualitative Delphi methodology able to support research transparency and generate reliable and valid results of user and functional requirements in knowledge intensive activities. The methodology was evaluated through application to a case study. This study's findings contribute to the requirements elicitation literature by showing a guided 'road map' to collect, analyse, and content-validate practiced-based requirements.

# **CONSUMER BEHAVIOR & MARKETING**



## USING THE HEALTH BELIEF MODEL TO ASSESS THE PSYCHOLOGICAL PREDICTORS OF THE COVID-19 BOOSTER VACCINATION ACCEPTANCE: AN ITALIAN CROSS-SECTIONAL STUDY

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COVID-19 vaccines are a fundamental tool in slowing down the pandemic: however, the new variants pose a threat, and healthcare systems are already starting to provide further doses to frail people and are planning to promote further doses to the whole eligible population. However, public doubts and hesitancy might impact the effectiveness of the future vaccination campaigns: it is important to understand the psychological predictors of the acceptance of future doses. We applied the HBM to the individuals' intention to accept a future dose. 787 Italian citizens who had already received or scheduled the booster dose filled an online survey. A multiple linear regression was run to assess the importance of perceived barriers, susceptibility to COVID-19, severity of Covid, benefits of vaccination, formal and informal cues. The model resulted significant, with a good R2 index (0.39). Presence and absence of barriers ( $\beta=-.14$ ;  $\beta=.23$ ), formal cues ( $\beta=.22$ ) and susceptibility ( $\beta=.18$ ) were the most significant predictors. Informal cues, benefits, and perceived Covid severity were only marginally significant. It is therefore important that future COVID-19 vaccination campaigns consider the predictors to frame communication messages to effectively sensitize the target population

## “FOOD IS MORE THAN JUST A SOURCE OF NUTRIENTS”: A QUALITATIVE PHENOMENOLOGICAL STUDY ON FOOD INVOLVEMENT

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The role of food in people's lives is becoming increasingly symbolic, stimulating research into the construct of Food Involvement (FI). However, there do not seem to be qualitative studies aimed at investigating its subjective and symbolic value. Consequently, the study aims to qualitatively explore the personal meanings that consumers ascribe to FI and detect its major psychological domains. Fourteen in-depth phenomenological interviews were conducted and analyzed according to the principles of Interpretative Phenomenological Analysis. The study involved people belonging to three prototypical profiles: mothers, cooks, and athletes. These profiles were selected because, given their lifestyles, they have an intensive FI experience. Results showed that FI is characterized by a deep relationship between the consumer and food that allows satisfying one's ambitious transformative project that involves the self, the other or both actors. Indeed, through FI, it is possible to reach a psychological-emotional balance, express one's own identity by satisfying the need for self-realization and a sense of belonging. This study gives a scientific contribution to the literature about FI to create effective definitions and measurement scales that assess its symbolic role.

## UNDERSTANDING FOOD-RELATED BEHAVIOURAL PATTERNS AND MOTIVATIONS BEHIND FOOD CHOICES: A CLUSTER ANALYSIS ON A SAMPLE OF IBD PATIENTS

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Food has fundamental role in determining health, particularly in patients with IBD. It is important to understand the motivations behind food choices, and the psychological determinants of food-related misbehaviours. The engagement towards health and food are important factors in identifying groups of people with different patterns regarding food choices. 890 IBD patients filled a survey including the PHE scale and FIS as profiling variables; Food-related QoL, FCQ, and a battery to survey alimentary habits were included. A k-means cluster analysis identified four clusters: high PHE and FIS (27.1%), low PHE and FIS (22.6%), high PHE and low FIS (29.3%), low PHE and high FIS (21.0%).  $\chi^2$  and ANOVAs were run to characterize these groups from a sociodemographic, clinical, and psychological point of view. Results show several significant differences across the groups, in particular regarding motivations behind food choices, and food-related QoL. Coherently, participants with high FIS prefer palatable food, with the risk of indulging to cravings and to regulate mood with food. High PHE seems to be a protective factor. These results allow the understanding of motivations behind food choices in IBD patients, and the identification of patients that are at higher risk of food misbehaviours.

## DIFFERENT CONCEPTIONS OF MONEY AND THE ECONOMIC CRISIS: A STUDY ON SOCIAL REPRESENTATIONS IN THE ITALIAN CONTEXT

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In the last years the instability of the socio-economic context has been breeding ground for the representations shared by Italian citizens about two key elements of daily life to change: the economic crisis and money. This study aims to combine the perspectives offered by economic psychology and social psychology to develop a new point of view on how money and the economic crisis are experienced and perceived by individuals belonging to different social groups, in an environment requiring great adaptability and the adoption of new practices, even in the financial context. From a methodological perspective, free association task was adopted as a common method of investigating social representations. Thus, 300 participants completed an online questionnaire composed by both spontaneous associations and self-report scales, in the aim to recreate the social representations of money and of the economic crisis, highlighting how each of them differs in relation to (1) the life-cycle phase, distinguishing between young people in a phase of construction and stabilization of their own path and more adult subjects in a more stable and structured stage, and (2) the perception of financial vulnerability, which reflects concerns and uncertainties concerning one's economic and working situation.

# VOCATIONAL TRAINING

## DO PEOPLE KNOW HOW WORK CHANGED THEIR PERSONALITY? CORRELATES OF PERCEIVED AND ACTUAL PERSONALITY CHANGE DURING A THREE-YEAR PROFESSIONAL TRAINING

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In this study we investigated associations between personality traits change and self-perceived personality change, assessed by self-descriptions. We combine the analysis of change by standardized questionnaires, with the analysis of responses to questions about self-perceived change in personality traits, using the McAdams system for narrative coding (see Robins et al., 2005). We used data from about 120 in-training workers, attending a three-year professional training. Measures of the Big Five traits were gathered at three time points (at the beginning of the training, at the beginning of the second, and of the third year of training), along with workers' responses to questions about their self-perceived change. Results corroborated the hypothesis that personality traits can show systematic changes even across a relatively short time period of intensive work training. We found significant associations between indices of narrative quality (in terms of agency, communion, contamination, redemption, coherence, affective tone, causality) with quantitative measures of personality change. In sum, we found that people possess a certain degree of awareness of how professional training changes their habitual way of thinking, feeling, and behaving, namely their personality traits.

## INDIVIDUAL PLACEMENT AND SUPPORT (IPS): EFFICACY IN PATIENTS WITH MODERATE-TO-SEVERE MENTAL ILLNESS FROM AN ITALIAN REGION

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In recent years there has been an increase in attention towards supporting people with mental illness in their access to competitive jobs. Individual Placement and Support (IPS) is an evidence-based intervention whose efficacy with Italian patients has been proved by several studies. An Italian region (i.e., Emilia-Romagna) has included IPS in its policy and many Community Mental Health Centers are offering this service to their users, so it is crucial to assess whether there are differences in its efficacy among the centers and what variables may have influenced such differences. To this end, data concerning 2723 IPS patients with moderate-to-severe mental illness were collected, including: socio-demographic characteristics, diagnosis, benefits received, and type of job obtained. Unlike previous studies conducted in Italy, the sample includes patients with substance/alcohol dependence, making it possible to assess IPS efficacy with patients with said condition. Data collection is ongoing. Results show the effects of different variables (e.g., diagnosis received, days passed from the first meeting with IPS operators to the first job interview) on IPS efficacy across the region. The results' implication for the implementation of IPS interventions in the future will be discussed.

## DOES WORKPLACE TRAINING STILL WORK? TESTING THE EFFICACY OF ONLINE AND IN-PRESENCE TRAINING MODALITIES IN THE POST-PANDEMIC SCENARIO

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In the context of the pandemic, workplace training had to reinvent itself shifting from presence to distance modalities, significantly impacting contents' processing and learning outcomes. The present study aimed to investigate the differences between online and in-presence training courses with a focus on training transfer. Participants were 93 workers who attended training courses either online (54%) or in-presence (46%). Moderation analyses were conducted to explore the effects of perceived training quality, self-efficacy, and organizational learning culture on the transfer of training for different training modes. Results showed that training quality had a significant main effect, while self-efficacy was significant only for online courses and organizational culture was significant only for in-person courses. Theoretical and practical implications suggest a revision of the traditional training transfer models when applied to different learning modalities. In the context of remote learning where the individual is left alone to manage learning, self-efficacy may be crucial to motivate to transfer. Conversely, in the context of in-presence courses where the group is an important driver for knowledge sharing, organizational culture may be a more relevant element for transfer.



## HEALTHCARE WORKERS' SATISFACTION WITH A DIGITAL-BASED INTERVENTION TO PROMOTE TEAM COMMUNICATION BASED ON SOCIAL NETWORK VISUALISATION: A LONGITUDINAL EVALUATION

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This study evaluated recipients' satisfaction with a digital intervention to promote communication in 7 teams from a large Northern Italian public healthcare organisation (N = 62). Based on visualisation of software-generated sociomaps, intervention consisted of 4 three-hour team coaching workshops occurring on videoconferencing platform to reduce gap between current and desired patterns. Usability, acceptability, integrity, training design, and transferability (21 items) were measured one week after second (T1) and fourth session (T2). At T1 (n = 33), paired-samples T test showed integrity (M = 3.97, SD = .56) to be significantly higher than acceptability (M = 3.61, SD = .69; p = .002), transferability (M = 3.65, SD = .55; p = .004), and training design (M = 3.70, SD = .53; p = .012). At T2 (n = 29), usability (M = 4.03, SD = .58) was significantly higher than acceptability (M = 3.51, SD = .65; p = .001) and training design (M = 3.70, SD = .70; p = .039). Repeated measures ANOVA showed no significant within-subjects effects of time (n = 19; p > .212). Recipients were stably satisfied with intervention over time and appreciated usability and integrity the most. Healthcare practitioners may design team communication digital interventions accordingly.

## LEARNING DESIGN STRATEGIES IN MASSIVE OPEN ONLINE COURSES FOR PHYSICIANS: A SCOPING REVIEW

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In recent years, the increasing implementation of massive open online courses (MOOCs) has been reported. This technology-enhanced teaching method plays a pivotal role in online education due to its capability to provide high-quality learning resources to a large number of students with great feasibility, shaping according to their different learning requirements. Although the widely MOOCs adoption in medical education has led to many benefits for undergraduate or graduate doctors, their role remains unclear, suggesting the need to analyze the key factors of this learning method in physicians' education. In order to achieve this aim, a scoping review, using the PRISMA method for qualitative synthesis, was performed. The literature review considered studies published from 2014 to 2021. Through the analysis of three independent coders, the following main areas of interest emerged from the literature: (1) participants' characteristics, (2) teaching methods and contents, (3) MOOCs and traditional courses, and (4) assessment methods of MOOCs impact. The review provides valuable evidence on MOOCs, which might be helpful for academic and healthcare organizations in designing effective online courses for physicians.

# **WELL-BEING AT WORK & JOB INSECURITY**

## HAVING A CAREER CALLING PROTECT FROM BURNOUT AND RESIGNING: EVIDENCE FROM HEALTHCARE WORKERS DURING COVID-19 PANDEMIC

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The effort and dedication showed by healthcare workers during the COVID-19 pandemic helped building their collective image of individuals who are called to their job. People with a calling experience a transcendent summons to a work that is perceived helpful and meaningful. They are passionate about their work and are willing to make sacrifices for it. Empirical evidence suggests that calling leads to positive outcomes and protect individuals from stress and burnout. Given the increasing theoretical and practical interest in the role of calling, it becomes important to explore its role in extreme working conditions. Among a sample of 275 Italian healthcare workers during the COVID-19 pandemic this study investigated whether calling acts as a buffer against the detrimental effects of fear of COVID-19, demand and burnout on turnover intention. The results showed that career calling is negatively related to both burnout and turnover intentions and buffers the impact of fear of COVID-19 on demand and the impact of burnout on turnover intentions. When calling is high, the effects of fear of COVID-19 on demand and of burnout on turnover intentions are null. This work contributes to the literature showing that calling protects individuals even in highly stressful work environments.

## THE SHOW MUST GO ON: PANDEMIC CONSEQUENCES ON MUSICIANS' JOB INSECURITY PERCEPTION

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The COVID-19 pandemic deeply affected how we relate to the world and changed many features in the music sector (Botstein, 2020). The purpose of this study was to analyze how the COVID-19 pandemic influenced the perception of job insecurity in Italian musicians. Following Parker and colleagues (2021), we collected the answers of more than 200 Italian musicians in the pre-pandemic and post-pandemic period adopting an online questionnaire. The data showed that musicians' perception of job insecurity increased after the pandemic outbreak. Furthermore, we found that employment contracts are a strong predictor of perceived job insecurity even after the pandemic. On the resources side, it emerged that social support is vital in buffering job insecurity perception and motivation is a powerful moderator of emotional exhaustion and turnover intentions. Additionally, the analyses showed that job insecurity was strongly related to the intentions of leaving the profession both before and after the pandemic. Finally, it emerged that the most detrimental effects are related to job insecurity subjectively experienced rather than from its objective indicators.

## “NAVIGATION ON A SEA OF UNCERTAINTIES DOTTED WITH ISLETS OF CERTAINTIES” SUPPORTING WORKING MOTHERS TO MANAGE THE UNEXPECTED

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In the last three years, the world has been affected by COVID-19, one of the worst pandemics in terms of complexity, pervasiveness and duration. When the possibility to overcome the major problems of COVID-19 became tangible, the war in Ukraine began, generating great concern in everyone's everyday-life. Unexpected and traumatic events can worsen psychophysical health, increasing everyone's allostatic load, especially women's. Indeed, on one hand the experiences of war may generate a sense of maternal inadequacy, on the other, COVID-19 has led to social isolation, interruption or loss of work, self concern and for their children, as well as stress, anxiety and depression. The aim of this study is to assess the impact that these recent traumatic events have had on personal and work resources, and on working mothers' well-being. A 4-steps intervention was carried out to promote the participants' individual resources useful for managing the unexpected, preceded by the administration of a questionnaire (t1) aimed to assess some psychological dimensions (e.g. perceptions of future opportunities, anxiety, stress, fear of COVID-19 and war). Finally, the same questionnaire was administrated (t2) to verify the efficacy of intervention.

## JOB BURNOUT AND INTERCULTURAL SKILLS OF FRONT-LINE PRACTITIONERS WORKING WITH MIGRANTS

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Front-Line Practitioners (FLPs) are workers that interact with migrants coming from different cultures, such as border guards and social workers. The adjustment required by the cross-cultural working environment seems to be related to high levels of burnout (Robinson, 2013). The Job Demands-Resources Model posits that job and personal resources contribute to the wellbeing of employees. This study investigates Cultural intelligence (CQ; Earley and Ang, 2003), the capability of interpreting cultural differences, as a personal resource which is negatively related to FLPs' burnout. 277 FLPs responded to a EU-wide survey that was disseminated from March to April 2022 as part of the EU funded H2020 PERCEPTIONS project. Data collection has just been concluded; thus, data analysis is still in progress. CQ was measured through the Cultural intelligence Scale (CQS; Ang et al., 2007), while job burnout was assessed through the Maslach Burnout Inventory (MBI, 1996). Respondents were mainly females (66%) who work in the following sectors: immigration and asylum (28%), followed by immigrant integration (21%) and social welfare (10%). We expect that CQ will be negatively related to burnout and this relationship to be moderated by FLPs' language competences and cultural diversity trainings.

## CROSS-CULTURAL VARIATIONS IN THE MEANING OF CAREER CALLING

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Career calling defines the extent to which people see their work as a pervasive passion, experienced as a transcendent summons, that defines their identity, their life's purpose, contributes to the common good and for which they are willing to make sacrifices. We report the results of a cross-cultural investigation (N = 2491) that assessed how calling is conceptualized across India, Turkey, China, Italy, the USA, and The Netherlands. Results suggest that career calling is conceptualized equivalently across all samples. Surprisingly, we observed that calling is higher in non-western countries. Within-nation comparisons across dimensions of calling showed that Italian and Dutch participants scored lower in Transcendent Summons and Pervasiveness. Italy is high in Purpose and Identity, while The Netherlands are high in Sacrifice. India is low in Transcendent Summons and high in Purpose, Identity and Prosociality. Across nations, China is highest in Transcendent Summons and Pervasiveness. We also observed non-trivial differences between Indian participants who answered in English or Hindi. These results support the notion that approaching work as a calling is a fundamental instance of human beings that is only slightly influenced by culture.



# **CONSUMER BEHAVIOR & INNOVATION**

## A NEUROSCIENTIFIC APPROACH TO THE BRAND RELATIONSHIP: THE CONNECTION BETWEEN INSTITUTIONAL VIDEO AND NEUROPHYSIOLOGICAL RESPONSE

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Communicating corporate values through institutional videos can be essential in creating relationship with consumers. Studying this relationship with innovative neuroscientific techniques represents an opportunity to investigate unconscious and emotional dimensions. In this study, we related the neurophysiological reaction to institutional video and responses on traditional scales. Among 50 students, we collected data on brand love and brand attachment scales of the Italian brand Ferrero. Subsequently, the subjects visualized the institutional video of the brand. Correlation analysis showed that brand love and brand attachment scales correlated positively with cognitive engagement ( $r = 0.53, p < 0.05$ ;  $r = 0.58, p < 0.05$ ) and time spent on the brand name while watching the video ( $r = 0.33, p < 0.05$ ;  $r = 0.32, p < 0.05$ ) and correlated negatively with memorization index ( $r = -0.59, p < 0.05$ ;  $r = -0.57, p < 0.05$ ). It is planned to increase the sample size, which is currently small, and expand the test to brands in different product categories. Framing the relationship between the brand, its values and consumers from a neuroscientific perspective may lead to a new academic strand providing important practical input for companies and allowing communication campaigns to be redesigned.

## THE INCREASING OF PERCEPTION OF CONSUMERS' AWARENESS ABOUT SUSTAINABILITY BRANDS DURING PANDEMIC: A MULTI MEDIATION MODEL

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The pandemic event had important repercussions also on the consumption, pushing individuals to limit their consumption practices in order to adapt to the situation of confinement imposed by the pandemic, but also to rethink their consumption styles, choosing products and services more carefully and responsibly. This research contribution aims to detect within a sample of Italian consumers the propensity to adopt and choose sustainable consumer goods and whether this effect is due to an increased sense of awareness and responsibility. The participants recruited were 669 Italian consumers (Female= 514, 76.8%; Male=155, 23.2%) that chose sustainability brands, aged between 18 and 65 years (Mage = 35.45; Standard Deviation, SD = 9.51). A multilevel mediation was carried out to test our hypotheses. The results showed that there was a direct effect of Perceived Consumer Effectiveness on Ethical Consumption Behaviour ( $\beta = .38$ ) and on Attitude Toward Business ( $\beta = .23$ ). The spread of the COVID-19 pandemic affected consumer consumption styles and led to a growth in online shopping and purchases of sustainable products. Several theoretical and practical considerations emerged from the results of the study.

## HOW AND WHEN MAY MANAGER COMPASSIONATE GOALS FACILITATE FIRM INNOVATION AND PERFORMANCE? A STUDY IN SMALL AND MEDIUM-SIZED ENTERPRISES

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Prior research has identified managerial features as key drivers of a firm's innovativeness, and the latter as a vital source of Small and Medium-Sized Enterprises (SMEs) performance. However, it is unclear how and when compassionate managers promote the implementation of innovations that facilitate firm performance. Drawing on social exchange and social information processing theories, this study tests the mediating mechanisms and the boundary conditions associated with the impact of manager compassionate goals on firm innovation and, ultimately, performance. Results from time-lagged, multi-source data collected from 115 SMEs revealed that the positive impact of manager compassionate goals on firm performance is sequentially mediated by organizational cooperation and firm innovation, but only when managers show low self-image goals and there is a high level of support for innovation in the workplace. These findings shed new light on the benefits of managerial compassion at work and offer practically relevant information to help managers support their firm's innovation and performance.

## NEUROKINEMATICS: FIRST NEUROSCIENTIFIC EVIDENCE OF DIFFERENTIAL EFFECTS OF MULTIPLE TRAILERS OF THE SAME FILM

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Neurocinematics is a new field of study aimed at analysing psychological reactions to films using neuroscientific methods. Three trailers (teaser, theatrical trailer 1 and theatrical trailer 2) of the same film were analysed to estimate their differential effects on neurophysiological and psychological levels. 120 subjects, divided into three groups of 40, watched one of the three trailers for the first time. During the viewing, a synchronised recording of electroencephalographic and skin conductance activity was made, followed by a questionnaire. Neurophysiological metrics confirmed the ability of the three trailers to elicit distinct reactions in terms of degree of attention, emotion and narrative comprehension, indicative of different communicative intentions. The pioneering nature of the study suggests that its results should be corroborated and extended. For the first time in science, the existence of a differential effect induced by different trailers of the same film is demonstrated. This opens up the possibility of a new line of research investigating the effectiveness of film strategies in relation to the consumer's viewing experience from the point of view of optimising both the scenes of the individual trailers considered separately and how the trailers are combined

# **POSITIVE ORGANIZATIONAL BEHAVIOUR & CHANGE**

## ACTION-RESEARCH AS AN APPROACH TO RENEW ORGANIZATIONAL WELFARE. THE CASE OF A NETWORK OF SOCIAL COOPERATIVES

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Social Cooperatives are characterized by participation and shared values oriented to guarantee social and economic stability. This model of governance can therefore allow for the full expression of organizational welfare by going beyond the paternalistic logic. Study aim was to promote operational knowledge for a network of cooperatives in renewing their welfare model in the light of their own value pillars and to promote an effective transformation of the internal welfare system. The action-research involved a representative sample of the entire organizational population through 6 focus groups and 4 interviews. Data have been analysed with N-vivo. The research highlighted several operational steps to accompany the welfare renewal in line with organizational actors' perspective: need for an operational direction to coordinate welfare; systematization and redefinition of the services already existing; workers' needs analysis; identification of an organizational space dedicated to welfare. In summary, the process has given voice to all organizational actors, rebalancing the dominant thoughts within the organization. The research, in fact, has allowed to put order in a phase of organizational change through processes of co-construction of meanings and operational strategies.

## NEW CHALLENGES OF INTER-ORGANIZATIONAL NETWORKING IN THE MENTAL HEALTH CARE OF FORCED MIGRANTS: A CASE STUDY

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The cooperation between organizations and the sharing of specific skills between professionals represent crucial challenges in mental health care of forced migrants. Networking is a sensitive task that requires specific tools and a constant evaluation. A case-study concerning an Italian city - one of the most important destinations of forced migrants - has been carried out to explore the elements that facilitate or interfere with the effectiveness of the network. In detail, 24 professionals (12F and 12M) from various organizations (police headquarters, hospitals, refugee centers and legal aid centers) were involved in 5 focus groups. During the focus groups, a projective stimulus (pictorial images) was used to capture the deepest aspects of the professionals' experience. The focus groups were literally transcribed. Data analysis was conducted within a constructivist paradigm; a paper-pencil content analysis was carried out following the lines of the interpretive-phenomenological analysis. Among the most significant results is the failure of the paradigms of classical psychiatry that do not consider the transcultural dimension, the lack of inter-organizational procedures and the loneliness of professionals who work between idealization of care and the frustration of daily practice.



## ITALIAN ADAPTATION OF THE PEMBERTON HAPPINESS INDEX WITH AN APPLICATION TO DAILY AND WORKING LIFE

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Happiness is a multi-faceted phenomenon in individuals' lives. It benefits mental and physical health, social relations, employment, education, environment. The Pemberton Happiness Index (PHI) covers general, hedonic, eudemonic, social well-being and considers Experienced and Remembered well-being as timeframes. The study verifies if PHI, validated in European and world countries, is suitable for the Italian culture. The data (n=410 randomly divided in two groups) allow to perform exploratory (EFA) and confirmatory (CFA) analyses, examine Pearson's correlations with other scales, and assess internal consistency (Cronbach  $\alpha$ ). Through EFA and CFA, in line with the original validation, the best solution indicated a unidimensional structure of Remembered and Experienced Well-beings score. Pearson's correlations evinced positive correlations with psychological well-being and satisfaction with life and negative correlations with negative affect. This confirms the weight of individuals' evaluation of happiness and the relation between well-being and optimal functioning for individuals and for healthy working places. PHI proves to be a concise solid scale, suitable to the Italian culture as applied to a 2019-20-21 research (n=1099) showing significant changes by genre and age.

## “I GROW AND THRIVE”: A STUDY ON THE MEDIATING ROLE OF THRIVING AT WORK IN THE RELATIONSHIP BETWEEN ORGANIZATIONAL CAREER GROWTH ED EXTRA-ROLE PERFORMANCE

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Starting from the Positive Organizational Behavior movement, several studies showed that people-based approach to the study of work performance contributes to improving the I-O relationship: a thrive work behavior develop commitment and engagement, favoring the organizational’s response to the Industry 4.0 demands and the pandemic situation (Rudolph et al., 2021). The present study aimed to investigate the positive effect of Organizational Career Growth (OCG) on Extra-role performance (ERP), considering the mediating role of Thriving at work (THW). A mediational hypothesis was tested on 461 workers, through a self-report questionnaire containing: the Organizational Career Growth Scale (Spagnoli & Weng, 2017), the Thriving at Work Scale (Porath et al., 2012), the Extra-role Performance Scale (Podsakoff et al., 1990). The hypotheses was tested through mediation model (PROCESS 4 - SPSS 22.0) with bootstrapping analysis for significant effects. The results showed a totally mediation of THW in the relationship between OCG and ERP. The limits were self-report responses and cross-sectional study on an undifferentiated sample. The contribution promotes the people-based approach to the study of organizational behavior, favoring the organizational development and organizational change.

# WELL-BEING AT WORK

## THE ROLE OF PERCEIVED RESTORATIVE QUALITY OF THE ENVIRONMENT IN THE ACADEMIC CONTEXT IN IMPROVING INTRINSIC AND EXTRINSIC MOTIVATION, AND FLOW

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The perceived quality of learning environment may affect the recovery completeness and influence both motivation and concentration. Little is known about how perceived characteristics of the learning environment and specifically sub-dimensions of Restorativeness (Being Away, Fascination, Compatibility, and Extent) can promote these positive effects in the academic context. We addressed the possibility that the characteristics of learning environments may improve concentration and involvement in activity (i.e., Flow) via Intrinsic and Extrinsic Motivations for academic study. A total of 163 Italian University students completed a questionnaire composed by the construct considered in this study. Results confirm that restorative quality of the learning environments (i.e., Being Away, Fascination and Compatibility) is positively correlated with Flow but there is a non-significant relationship between Extent and Flow. Multivariate regression analyses show a significant indirect effect of Being Away, Fascination, Compatibility both through Intrinsic and Extrinsic students Motivation. Results underline the importance to consider the, restorative quality of the environment for improving place design, concentration and learning motivation of students

## COVID-19 RELATED TRAUMA AND CROSS-CULTURAL ADJUSTMENT (CCA): A CONSERVATION OF RESOURCES (COR) PERSPECTIVE

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Expatriation is a potentially stressful experience and some conditions can further complicate this process by reducing workers' ability to cope with new working and living conditions, such as in the case of trauma. The COVID-19 pandemic represents a potentially traumatic event with long-term consequences that has influenced international assignments on a global scale. The aim of this study is to investigate how COVID-19-related trauma can affect the CCA of expatriates. Specifically, drawing on COR theory, we hypothesize that COVID-19-related PTSD may reduce the ability to face the challenges of the adjustment process both directly and indirectly through a deterioration in psychological health. In addition, we analyze the influence of perceived organizational support (POS) by theorizing a moderated mediation model. As expected, the results of the analyzes conducted on a sample of 170 expatriates showed that COVID-19-related trauma is associated with CCA directly and through psychological distress. Moreover, the link between COVID-19-related PTSD and psychological health and the indirect effect showed different shapes for varying levels of POS. These results provide useful insights for promoting expatriates' psychological health and designing appropriate intervention programs.

## PROFESSIONAL QUALITY OF LIFE IN HEALTHCARE AND EMERGENCY WORKERS DURING SECOND AND THIRD WAVE OF COVID-19: IMPACT AND EFFECTIVENESS OF DISPOSITIONAL RESILIENCE

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Working as healthcare workers and emergency workers during the first wave of COVID-19 has been associated with high levels of stress and burnout, while hardiness, and resilience have emerged as protective factors. Two studies were conducted recruiting healthcare workers and emergency workers involved in the care of COVID-19 patients. The main purpose of our study was to verify the trend of stress, anxiety, depression and resilience levels during the pandemic and the effects on their quality of professional life in Italian health and emergency workers of comparison of a first sample recruited from the first wave of COVID-19 (N = 250) with a second sample relative to the second wave (N = 273) and with a third sample relative to the third wave (N = 295). The results show that the mediating effect of resilience between predictors and outcomes is verified in the first wave on all variables, while the effect of depression in the second wave on professional quality of life increases and in the third wave while maintaining still high levels of stress, the effect of physical resilience is total compared to the quality of professional life.

## VALUING DIFFERENCES IN ORGANIZATIONS - A QUANTITATIVE STUDY

*Diletta Gazzaroli (Università Cattolica del Sacro Cuore), Shata Diallo (Università Cattolica del Sacro Cuore), Caterina Gozzoli (Università Cattolica del Sacro Cuore)*

Diversity management is crucial for organizations as it increasingly affects the connection between business and well-being. Study aim was to understand organizational culture of difference trends and their specific impacts on organizational life quality. 3,247 questionnaires were collected through an online survey investigating organizational culture of difference; conflict; relationships quality; innovation; work-objects; commitment. Data were analysed in aggregate form using ANOVA through SPSS. Results shows that, even if there's a general recognition of difference in economic and value terms, organizations lack competences and cultures oriented toward performance or adherence to homologous standards still prevail. ANOVA shows that organizational cultures of difference have a statistically significant impact on organizational life quality; more specifically, the integration/inclusion one has the greatest impact in promoting participation, innovation, commitment, and well-being. To conclude, enhancing differences is one key factor to support the growth of organizations and professionals and it requires managing human resources not referring only to individual characteristics or single management actions, but interweaving the individual, relational and systemic dimensions.

## PSYCHOLOGICAL FLEXIBILITY AND WORK ENGAGEMENT AS MODERATORS IN THE RELATIONSHIP BETWEEN THE WORKAHOLISM ANTECEDENTS OF PERFECTIONISM AND WORKLOAD AND THE CONSEQUENCE OF WELL-BEING

*Angela Russo (Dipartimento di Scienze della Formazione, Università di Catania), Giuseppe Santisi (Università di Catania)*

The study seeks to obtain more information on the impact of workaholism on well-being, investigating its antecedents, consequences and moderating variables, using the Job Demands-Resources Model, which assumes that the risk of unfavourable outcomes is highest in working environments where job demands are high while job resources are limited. Starting from these, it is hypothesized that dispositional perfectionism and contextual workload would influence workaholism and that psychological flexibility would moderate the effect of perfectionism on well-being; meanwhile, work engagement would moderate the impact of workload on well-being. The study involved 211 workers aged 19 to 65 ( $M = 37$ ,  $SD = 13$ ) who responded to: Hewitt and Flett Multidimensional Perfectionism Scale, Bakker Workload Scale, Acceptance and Action Questionnaire, Utrecht Work Engagement Scale, Dutch Work Addiction Scale, Flourishing Scale. Moderated mediation analysis was performed. The results showed that perfectionism and workload affect workaholism, which in turn affect flourishing in workers. Furthermore, psychological flexibility can moderate the impact of perfectionism on flourishing, while work engagement can moderate the effects of workload on flourishing. The implications for HRM will be discussed.



# **DIVERSITY, DISCRIMINATION & EQUALITY**

## ATTITUDE AND WILLINGNESS TO INTERVENE IN CASES OF BULLYING: AN INVESTIGATION OF IN TRAINING AND IN SERVICE TEACHERS

*Daniela Acquadro Maran (Dipartimento di Psicologia, Università degli Studi di Torino), Tatiana Begotti (Dipartimento di Psicologia, Università degli Studi di Torino)*

The purpose is to compare the attitudes and willingness to intervene of teachers in training (TT) and in service (TS) toward bullying (direct and indirect). 110 TT and 128 TS, working in Piedmont, completed a questionnaire. The following dimensions were examined: self-confidence, perception of the severity of bullying behavior, empathy for victims, willingness to intervene, and coping strategies suggested to victims. The results indicate that the severity of bullying and the likelihood of intervention are higher in TS in the case of direct bullying. In both groups, the perceived severity of the episode, in the case of both direct and indirect bullying, is associated with higher empathy for the victim and greater willingness to intervene. At TS, in the case of indirect bullying, perceived severity, empathy toward the victim, and likelihood of intervention are negatively associated with the presumption that maladaptive strategies are being used. Teachers are generally sympathetic to the severity of the phenomenon and the need for help from both the victim and the bully. This concern does not necessarily lead to intervention, as a lack of self-efficacy may make it difficult to take direct responsibility for intervention.

## A RHIZOMATIC CARTOGRAPHY OF MIGRANT WORKPLACE INTEGRATION: NEW INSIGHTS FROM THE AOSTA VALLEY CASE

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Our research investigates the integration of migrants inside and outside workplaces in Italy, offering a cartography of the local initiatives aimed at supporting migrant integration in the context of Aosta Valley. Our aim is to develop novel ideas to rethink the organisation of migrant integration and respond to forms of exclusion of migrants. In doing this we develop a framework that draws from the work of Deleuze and Guattari (1986), with specific attention to the concepts of rhizome and assemblage. To explore the intertwining of human and non-human entities forming the network of integration we employ methods from the Posthuman Institutional Ethnography and Patchwork Ethnography. Mixing different sources of data, these methods allowed us to overcome the anthropocentrism and fixity of conventional methodologies, favouring the creation of new viewpoints to study power, sociomaterial micro-practices and human/nonhuman relationships shaping the integration processes. Preliminary findings suggests that the organisation of migrant integration emerges as an immanent and non-linear network of relationships, connecting places, socio-material discourses and practices, human and non-human entities.

## ORGANIZATIONAL STIGMA: A SYSTEMATIC REVIEW AND SYNTHESIS

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This systematic review aims to individuate the main theories, types and levels in organizational stigma studies, in order to fix the state of the art about the topic and propose a synthesis of the perspectives reviewed. Indeed, literature about organizational stigma is growing but suffers of a lack of categorization of the different theoretical frameworks, stigma types classifications and levels of analysis. So, this systematic review includes reviews about organizational stigma and original studies about stigma types and levels. After individuating eight main theoretical frameworks on which organizational stigma is based, we found eight organizational stigma's classifications of types and four levels of analysis. Then, it is proposed a categorization model of organizational stigma in which four organizational stigma types' clusters (value, conduct, primary task and indirect) rise from the interaction of two dimensions related to organizational outputs, the tangibility/intangibility dimension and core/not core dimension. In this model, each organizational stigma cluster can be analyzed at an individual, group, corporate and cultural level.

# HUMAN RESOURCES MANAGEMENT

## TALENT MANAGEMENT BETWEEN CHALLENGES AND BIAS. A PHOTOLANGAGE EXPLORATIVE STUDY

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A lot of researchers have tried to define talent and to question about talent management, without arriving to a consensual definition, so that nowadays managerial practice concerning talent scouting and management cannot focus on a well-defined theoretical basis. Our study aims at exploring the way by which Italian managers approach talents, from the very first moments of talent scouting to the development and retaining of talents. The research design is inspired by mix-method research. We have run a session of photolangage whose purpose is to promote reflective thinking and facilitate personal expression by stimulating memory, emotions and imagination through carefully photographs (Bessell, Deese, Medina, 2007). Data have been analysed both in qualitative terms (metaphors analysis) and in quantitative terms (automatic content analysis supported by T-Lab software). According to our results, talent management seem to be both an individual and organizational issue, so that talents without an adequate organization will never blossom. For what concerns bias, it is interesting the co-occurrence of the words “talent” and “young”, which implicitly push HR managers to search for talent only in young workers.

## WINNING THE WAR OF TALENTS: A KID GAME!

*Teresa Galanti (Università degli Studi G. d'Annunzio di Chieti-Pescara), Stefania Fantinelli (Università degli Studi di Foggia)*

Industries 4.0 are facing a new challenge that involves the implementation of gamification procedures in the recruitment and selection processes; we are in front of a progressive digitalization of all HR processes. An ongoing interest of HRM in gamified processes is on increase with a specific line related to gamification in talent acquisition and management, even if there are very few data and evidences, even more in Italy. Aim of this research is to explore the point of view of experts in personnel selection and gamification in terms of opportunities and risks related to this new challenge. Sample is constituted by 15 experts coming from both human resource sector and information technology, who answered to an online semi-structured interview on gamification. Data were analysed by a mixed method approach through the use of both T-LAB software and thematic analysis. Results shed insights on employer branding procedures, on the validity and fairness of a gamified process of recruitment and selection and finally on its use in the talents war.

## THE ITALIAN VALIDATION OF THE PLAYFUL WORD DESIGN QUESTIONNAIRE

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Starting from proactive approaches and gamification theory, Bakker and colleagues recently introduced the concept of Playful Work Design (PWD). PWD concerns a cognitive-behavioral process through which employees proactively creating conditions to incorporate play into their work activities. The present study aimed to provide a contribution to the Italian validation of the PWD Questionnaire. PWD Questionnaire was composed by 12 items measuring two dimensions: designing fun, i.e., the ludic play, and designing competition, i.e., agonistic play. Participants were 175 employees from private and public Italian organizations. Significant results of the Italian validation of the PWD Questionnaire arise from the psychometric properties, factor structure and dimension. First, 12-items Italian version showed good psychometrics properties. Second, results of exploratory factor analysis supported the “designing fun” and “designing competition” dimensions. Furthermore, both dimensions show good reliability coefficients. Finally, positive correlations among PWD, job crafting and flow at work supported concurrent validity.



## PERSONAL RESOURCES AND ENVIRONMENTAL FACILITATORS OF AIR TRAFFIC CONTROLLERS' SELF-EFFICACY IN HANDLING CRITICAL EVENTS: A MIXED-METHOD STUDY

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Given to COVID-19 travel restrictions, air traffic controllers (ATCOs) have witnessed changes in their work modes, besides facing often critical events and decision-making under pressure. However, little is known about ATCOs during the pandemic. It is also still unclear how and when mindfulness may spur ATCOs self-efficacy in handling critical events. This study fills this gap by integrating data survey from a sample of 168 Italian ATCOs with qualitative data from 10 semi-structured interviews. Moderated mediation models and thematic analysis were performed. The results showed that the positive link between ATCOs' mindfulness and self-efficacy in handling critical events was mediated by problem-focused coping tendencies, but only when ATCOs had prior experience with critical events. The direct effect of mindfulness on self-efficacy was significant only for ATCOs who were trained in critical incident management. The themes that emerged from the interviews deepened these results. Despite its cross-sectional design and self-report nature, this is the first mixed-method study to identify mindfulness as a catalyst for ATCOs' self-efficacy during a pandemic. ATCOs could benefit from mindfulness interventions, mentoring, training in critical event management, and problem-focused coping.

## **SAFETY & STRESS**

## EXPLORATORY STUDY ON BIO-RISK PERCEPTION AND IMPACT OF SPECIFIC TRAINING

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Risk perception scarcely depends on rational factors, but it is strongly determined by emotions. Neuro-metric and biometric analysis techniques make it possible to investigate the emotional correlates of workplace risk behaviour, biological risk and psychological risk. We propose a preliminary study investigating the cognitive and emotional effect of specific training on risk perception and the impact on safety in the workplace. We used 36 channel EEG and related neurocognitive indicators of attention, cognitive overload and prefrontal asymmetry; skin conductance and heart rate variation for physiological analysis and Eye Tracker technology for studying visual attention during the administration of ad hoc video and photographic stimuli to assess perceived risk on a sample of 12 trained and 12 untrained subjects. A questionnaire of risk perception evaluation was also administered. We expect a difference between trained and untrained personnel especially in terms of risk perception, neurophysiological activation, cognitive overload and attention. The use of the neurocognitive methodology to study safety in the workplace and the effectiveness of specific training to investigate the cognitive and emotional experience in relation to the perception of risk in the workplace.

## CAN PSYCHOLOGICAL CAPITAL PROMOTE SAFETY PERFORMANCE? A LONGITUDINAL STUDY WITHIN SAFETY-CRITICAL ORGANIZATIONS

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Accident and injury prevention is one of the biggest challenges facing safety-critical organizations today. In fact, despite the interventions that have been made, accident and injury rates continue to be high. For a long time, research in this area has focused on the negative factors that lead workers to make mistakes (e.g., lack of attention), neglecting the role that positive resources can play in promoting safety behaviors. The objective of the present study is to test the role of Psychological Capital (PsyCap) in promoting safety performance. A longitudinal study was conducted involving 109 blue-collar workers (90.7% men) from the metalworking industry. Results show that: (1) PsyCap (T1) has a direct influence on safety performance (T2), (2) it mediates the relationship between specific job resources (role clarity and support) (T1) and safety performance (T2), and (3) it moderates the relationship between cognitive overload (T1) and safety performance (T2). To be generalizable, the results will have to be supported by other studies, conducted on larger and heterogeneous samples. Nevertheless, this study confirms the positive relationship between PsyCap and safety behaviors, strengthening the role of positive personal resources in promoting safety.

## SAFETY AND HUMAN FACTORS/ERGONOMICS ISSUES IN THE TRAM SYSTEM

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Trams are experiencing a resurgence in network expansion. This trend is a reflection of the current environmental, economic, and societal pressures to tackle current and future challenges for sustainable and liveable cities. Indeed, trams offer high passenger capacity, good comfort, and very low emission of pollutants compared to other transport systems. However, whilst research in Human Factors/Ergonomics (HFE) transport systems (such as aviation and/or heavy railway) is extensive, there are still limited studies exploring the HFE issues underlying tram operations. To target this gap, this study had a two-fold objective. First, it provided a scoping review to highlight the still open HFE issues related to the tram system. To do so, the tramway was analysed as a socio-technical system, where both technical and human/social components are tightly bound and interdependent from one another, and the interdependent influences concur to affect the overall systems' performance in terms of safety and well-being of its users. Second, with the help of international experts in the sector who shared their knowledge and insights on the topic, this study proposed some directions for future research on the tram transportation.

## SUSTAINABLE FARMING: CRITICAL VARIABLES AND AREAS OF INTERVENTIONS TO PROMOTE ON-FARM SAFETY BEHAVIORS

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Occupational safety has a remarkable impact on corporate sustainability, especially in agriculture, which is one of the most dangerous production sectors. Identifying the critical variables for the performance of protective behaviors can help in developing initiatives to reduce the incidence of accidents and improve safety and health among workers. The present study investigated the paths by which participation in safety training, workers' age and previous history of accidents and near misses, can influence the adoption of safety behaviors in agriculture, through the mediation of attitudes towards safety and perceived behavioral control (PBC). A questionnaire was administered to 310 Italian agricultural operators. Results showed that age, having attended safety training courses and having been exposed to accidents and near misses, showed a positive association with the adoption of on-farm safety behaviors, through the mediation of PBC. In particular, participation in training courses and age showed a positive association with PBC, while previous history of accidents and near misses showed a negative association with it. In turn, PBC was positively associated with the adoption of safety behaviors. Based on these results, possible areas of targeted interventions are discussed.

## STRESS WILL TURN MY HAIR GRAY! A LONGITUDINAL INVESTIGATION OF WORK-RELATED STRESS AND HAIR CORTISOL DURING THE COVID-19 OUTBREAK

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Work-related stress (WRS) is the process by which physical, psychosocial, or organizational aspects of the job (i.e., job demands/resources), by interacting with workers' individual characteristics (i.e., personal demands/resources), trigger psycho-physiological, physical and behavioural responses in the individual over time. Hence, the assessment of WRS benefits from the integration of different measurement methods and a longitudinal research design. Based on the Allostatic Load model, in this study we focused on the associations between self-report measures of WRS and hair cortisol concentrations (HCC), conceptualized as a physiological marker of stress. The measure of HCC (e.g., a strand of three cm.) reflects the cumulated secretion of cortisol over time (e.g., three months). Approximately three hundred workers completed a self-report questionnaire at two time points (three-months time-lag) during the COVID-19 outbreak. Participants were also asked to provide a hair strand (i.e., approximately three cm.) at both waves. Results showed that self-reported measures of WRS were associated with HCC over time. This study suggests that HCC can be considered as a biomarker of stress, and measurement of HCC could be beneficial for early diagnosis and prevention of WRS.

# **WELL-BEING AT WORK & INTERVENTIONS**



## THE ORGANIZATIONAL COMMON GOOD PROVISION SCALE (O-CGP): A TOOL FOR ASSESSING EMPLOYEES' ORIENTATION TOWARDS THE ORGANIZATIONAL COMMON GOOD

*Cinzia Castiglioni (Università Cattolica del Sacro Cuore), Edoardo Lozza (Università Cattolica del Sacro Cuore)*

At organizational level, it is of paramount importance to grasp the micro-foundation of individual drivers of sustainable behavior, which takes place when collective interest prevails over individual one. Although it is known that employees' involvement and engagement at work play a crucial role at promoting prosocial organizational outcomes and actions that may benefit the organization, the present study aims to analyze the psychometric properties of a new metric specifically designed to assess employees' motives behind the orientation towards the organizational common good. Such new metric (O-CGP) has been adapted for the organizational context based on the Common Good Provision scale (CGP, Castiglioni et al., 2019). Both exploratory and confirmatory factor analyses were undertaken to validate and improve the scale. The final scale, which consists of eight items, contains two dimensions as the original one: Accessibility (i.e., making the common good accessible to anyone in the company and fulfilling employee's basic needs) and Personal Gain (i.e., getting a return and personal advantage in exchange for one's contribution). The psychometric properties of the scale are further explored in relation to other organizational constructs.

## LET'S TALK ANXIETY: INSIGHTS FROM A CORPORATE ONLINE PSYCHOLOGICAL HELP SERVICE

*Alessandro De Carlo (Università degli Studi di Padova), Diletta Mora (Lumsa Università di Roma), Sebastiano Rapisarda (Lumsa Università di Roma), Annamaria Di Sipio (Università degli Studi di Padova)*

Anxiety, a component of many organizational well-being/disease models, is becoming more and more widespread among workers in a period characterized by relevant changes. Understanding anxiety, therefore, is a key factor in helping organizations to manage workers' mental health and increasing organizational well-being, individual and group performance. This study takes into account conversations to a corporate online psychological help service from three Italian companies. We take into account 20 conversations conducted with online psychologists in which workers describe their anxiety and its perceived causes. The content of these calls was summarized by the psychologists themselves, who were instructed in registering on partially structured forms the emerging problems as well as perceptions, feelings and emotions. Qualitative analyses were conducted. The reasons for anxiety are mainly divided in three clusters: uncertainty, discomfort related to job re-organization, fear of illness/contagion. Anxiety, today, is also perceived as a widespread and not shameful condition. Understanding these and other characteristics of anxiety can be a tool for researchers, as well as professionals and HR managers, for creating positive organizations.

## PROMOTING PSYCHOLOGICAL WELL-BEING IN ORGANISATIONS: A TOOL TO SUPPORT SMES AND THE PUBLIC SECTOR

*Federico Fraboni (Università di Bologna), Luca Pietrantonì (Dipartimento di Psicologia, Università di Bologna)*

The fragmentation of employee wellbeing management policies in Europe does not allow companies to address workplace-related issues efficiently and effectively. The H- WORK platform aims to support organisations in selecting multi-level intervention strategies that effectively promote the psychological well-being of employees. The platform targets employers, HR and RSPPs in SMEs and the public sector in an open-access, browser-based format. An analysis of similar platforms was conducted to identify potential competitors and highlight the platform's added value. It includes a self-assessment-based benchmarking system for which objective (e.g. age of workers, the proportion of migrant workers and workers with special needs, organisational competence) and subjective (e.g. management style, work-related stress, attention to ergonomics, people-centred culture, stigma) metrics were selected based on a literature review. The benchmarking system compares the collected data with European datasets and suggests potential intervention strategies (e.g. leadership coaching, stress management, appreciative survey feedback) selected on the basis of previous research.

## THE IMPORTANCE OF THE PLAYFUL WORK DESIGN AND ITS ANTECEDENTS

*Emanuela Caracuzzo (Lumsa Università di Roma), Antonino Callea (Lumsa Università di Roma), Arnold Bakker (Erasmus University Rotterdam, Netherlands)*

In recent years, organizations have become increasingly aware of the importance of employee happiness, as well as the role of personal resources in promoting Playful Work Design. PWD is a proactive employee orientation to make your work activity more fun and stimulating. PWD is distinguished in: designing fun, i.e., the search for humor and creativity, and designing competition, i.e., a healthy competition with oneself. Based on Conservation of Resource Theory, we hypothesized that the proactive personality predict PWD' dimensions through a sequential mediation, via individual and organizational adaptability. A total of 157 Italian employees completed an online questionnaire. The results showed that the proactive personality had a total positive effect on designing fun and competition. However, the significant direct effect on individual adaptability disappeared in favor of the sequential indirect effect. Therefore, individual and organizational adaptability partially mediated the effect of proactive personality on PWD' dimensions. This article contributes to the scientific knowledge about playful concept and its antecedents. It also provides new insights into the role of personal resources in promoting playful at work.

## **WORK & TECHNOLOGY 2**

## MANAGEMENT BETWEEN AUTOMATION PROCESSES, FUNCTION DIGITIZATION AND EMPLOYEE JOURNEY: DIGITAL TOOLS AND IDENTITY CONSTRUCTION PROCESSES

*Massimiliano Barattucci (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Tiziana Ramaci (Università degli Studi di Enna 'Kore'), Giuseppe Scaratti (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Silvia Ivaldi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Management transforms and the IT tools and automation processes allow for real-time data and the continuous implementation of procedures and organizational processes. In order to explore the perceptions of HR managers regarding the use of digital tools, the research involved 252 Italian managers who filled out an anonymous questionnaire posted on LinkedIn. The sample of managers was equally distributed by gender (women, N = 129; 52%) and with an average age of 39.9 years. The questionnaire investigated the frequency and objectives of use of various platforms and tools for HR management. Overall, the results showed that almost all managers: a) already use most of the tools and digital tools for recruitment and management; b) considers their use to be essential both for recruiting and for the employee journey; c) believes it is essential to invest in digital tools for the future of the company; d) for most of the managers interviewed, the digital tools and automation processes for the employee journey are useful for the processes of strengthening the corporate identity. The management must be able to seize this opportunity, and will be required to develop knowledge and skills useful for monitoring and managing this enormous amount of data and information.

## PLAYING AS THE WORLD FALLS APART: THE ROLE OF COMMERCIAL VIDEO-GAMES DURING THE COVID-19 PANDEMIC

*Arianna Boldi (Università degli Studi di Torino), Amon Rapp (Dipartimento di Informatica, Università degli Studi di Torino), Maurizio Tirassa (Dipartimento di Psicologia, Università degli Studi di Torino)*

The COVID-19 pandemic and the lockdown deeply impacted on collective life, yielding a distress situation. Gaming technologies proved to be useful during stressful life experiences, however there is a limited number of studies on commercial games in crisis contexts - compared to serious games. In this research we had a twofold objective, which was to explore if and how gaming practices changed during the lockdown and their possible role on people's lives during the pandemic. To this aim, we conducted an online survey involving 330 video game players who were living in Italy during the first lockdown and analysed the results qualitatively. Data showed that the pandemic modified the players' sense of space and time, transformed their social relations, and provoked negative emotions. The participants, however, used video games to compensate their thwarted needs, even though a variety of unexpected effects occurred. On the basis of the survey findings, we identify four different ways to escape from reality by using video games during moments of crisis. Moreover, we suggest some guidelines to improve the design of technologies for crises.

## ADVANCED PSYCHOSOCIAL RISK ASSESSMENT: THE TECHNOSTRESS QUESTIONNAIRE

*Georgia Libera Finstad (Dipartimento di Scienze Umane, Università Europea di Roma), Gabriele Giorgi (Dipartimento di Scienze Umane, Università Europea di Roma)*

Technology, as a substantial part of any industry, is structurally modifying the nature and organization of work, leading to what is referred to as the Fourth Industrial Revolution. In this perspective and considering the post-COVID-19 hybrid models, the assessment of psychosocial risks related to digitalization has become a primary concern. The purpose of this study is to create a new psychometric tool aimed at investigating the key dimensions of technostress. Specifically, the psychometric properties of the scales (reliability and dimensionality) were preliminarily analyzed. The content validity analysis led to a total of 80 items and 15 scales (usefulness/usability, reliability, technological self-efficacy, role, multitasking, job control, job demands, pace of change, pervasiveness, privacy, employability, supervisor and colleague support, involvement and training) which were administered to a sample of 235 Italian workers. Reliability analyses and exploratory factor analyses (EFA) were then performed for each scale. The results provided a good initial basis for a future in-depth evaluation of the tool, yielding to a two-factor solution for the multitasking scale only. Future studies using confirmatory factor analysis (CFA) are needed to analyze the structure of the scales.



# MINITALK

## VICTIMS OF KNOWN AND UNKNOWN CYBERSTALKERS: CONSEQUENCES AND COPING STRATEGIES

*Daniela Acquadro Maran (Dipartimento di Psicologia, Università degli Studi di Torino), Tatiana Begotti (Dipartimento di Psicologia, Università degli Studi di Torino)*

Cyberstalking is a behavior in which an individual, group, or organization uses technology to harass one or more individuals. The purpose of this study was to analyze the impact of cyberstalking in terms of physical and emotional consequences, symptoms of anxiety and depression, willingness to report the experience, and coping strategies, comparing young adult victims of known (KC) and unknown cyberstalkers (UC). A self-administered questionnaire was completed by 115 victims of UC and 127 victims of KC. The results show that KC victims most often suffer from fatigue, sadness, and lack of trust in others. Depressive symptoms do not differ significantly between UC and KC, while KCs have significantly higher levels of stretch anxiety. KC Victims are significantly more prone to alcohol and drug use, reduced social contact, gun purchase, and confrontation with the cyberstalker. UC Victims are more inclined to block online contacts and ask the social network administrator to intervene. The findings point to the need to intervene with prevention campaigns to promote victims' ability to ask for help.

## HOW CAN THE SEAFARERS DO IT? QUALITATIVE RESEARCH IN PSYCHOSOCIAL RISKS OF SOUTH ITALY'S SEAFARERS

*Francesco Buscema (Università degli Studi di Torino), Lara Colombo (Università degli Studi di Torino), Annalisa Grandi (Università degli Studi di Torino)*

The psychosocial risks of seafarers are a topic poorly explored in the international and Italian literature. This study aims to explore, using the Cox, Griffith and Gonzales' guidelines (2000), the psychosocial aspects of life on board. Semi-structured interviews were conducted involving a sample of 20 seafarers from South Italy. In addition, this research presents a comparison with Carter's study focused on psychosocial risks of seafarers prior to Maritime Labour Convention (2006). The results of our research show the presence of severe psychosocial risks in the sample such as: excess of workload, lack of crewmembers, falsification of legal documentation, lack of recovery, lack of families and inability to contact or be present with them. The seafarers usually assist or being involved to traumatic events. To discover the world, passion for the work and high salary are the most common work resources. The results of this study alarms about seafarers' work and life conditions. Future studies could include the administration of a tailor-made questionnaire, to explore the psychosocial stress factors, the protective factors of seafarers and outcome of well-being and discomfort at work.

## TURNOVER INTENTION IN A SAMPLE OF AUTOMOTIVE WORKERS: THE ROLE OF WORK-RELATED BULLYING AND ANXIETY

*Francesco Buscema (Dipartimento di Psicologia, Università degli Studi di Torino), Annalisa Grandi (Dipartimento di Psicologia, Università degli Studi di Torino)*

The pandemic period has brought many changes in the world of work and this situation has also led many workers to reflect on whether to stay or leave their own organization. The aim of the study was to understand, following the JD-R theory, which resources and which demands are associated with the turnover intention in a sample of workers in the automotive sector of northern Italy (N = 214), involved in an online survey (May-September 2021). Multiple regression analyses showed a positive and significant association of job demands (work-related bullying and disengagement) and specific demand related to the pandemic situation (anxiety and psychosomatic symptoms) with the turnover intention. With respect to job resources, a negative and significant association of commitment and seniority with the dependent variable has emerged. These results confirm the importance of maintaining a positive climate within the workplace, especially during a critical period such as a pandemic, to protect the wellbeing of workers and consolidate the sense of organizational belonging and therefore reduce the turnover intention. This study helps to expand the knowledge related to workers' wellbeing in a sector less studied in the organizational literature, namely the automotive sector.

## AN EXPLORATORY STUDY ON CAREER UNCERTAINTY AMONG UNIVERSITY STUDENTS

*Rita Chiesa (Università di Bologna), Audrey Ansay Antonio (Università di Bologna), Silvia Galassi (Università di Bologna)*

Instead of following a traditional career pattern, the trajectory of modern careers has become fragmented and unpredictable (Potter, 2019). In light of the changes observed in the external environment and in the nature of careers, this study explored the concept of career uncertainty as experienced by university students. Career uncertainty has been defined as any factors that make the individuals feel uncertain of their career future (Tien et al., 2005). Career uncertainty has also been argued to fundamentally affect individuals' self-perception and their ability to project themselves into the future. A qualitative research design was carried out to explore university students' career uncertainty. Online focus group discussions were conducted within a peer context of students from an Italian university. The results of the study centered on themes related to the perceptions and meanings ascribed to career uncertainty as well as the sources of career uncertainty. This study has implications on university students' career development in consideration of the early job insecurity and labor market conditions observed in Europe.

## BETWEEN LOCKDOWNS AND VACCINES: QUALITATIVE RESEARCH ON THE EXPERIENCE OF YOUNG ITALIANS

*Lara Colombo (Dipartimento di Psicologia, Università degli Studi di Torino), Virginia Riccio (Dipartimento di Psicologia, Università degli Studi di Torino), Francesca Negro (Dipartimento di Psicologia, Università degli Studi di Torino)*

The COVID-19 pandemic has changed people daily habits. The population between 18 and 35 years of age seems to have been the most penalized by the restrictions due to the lockdown, showing psychological symptoms following the confinement (Amerio et al., 2021). At the same time, despite an initially confusing institutional communication, this population responded to the vaccination campaign, exhibiting greater adherence than adults (Prati, 2020). This research was carried out to investigate the experiences and reasons of young Italians who underwent the vaccine. 31 Italian subjects (55% male gender) between 18 and 35 years of age ( $M = 23.58$ ,  $SD = 3.34$ ) and residing in Italy during the lockdown and vaccination campaign participated. Semi-structured online interviews were conducted to detect the pandemic experience. The data analysis (ALCESTE, 2018) highlighted two macro-categories: the lockdown experience (first cluster, 32% of corpus) and the vaccination campaign (second cluster, 39% of corpus). Related to the second cluster: vaccination hesitancy (third cluster, 13% of corpus) and the good reasons for the introduction of the Green Pass and the mandatory vaccination (fourth cluster, 16% of corpus).

## THE ROLE OF TRANSVERSAL COMPETENCES BETWEEN PSYCHOLOGICAL CAPITAL AND ACADEMIC GOALS. AN EMPIRICAL STUDY IN UNIVERSITY STUDENTS

*Elisa De Carlo (Dipartimento di Scienze dell'Educazione, Università di Bologna), Emanuela Ingusci (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento), Andreina Madaro (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento), Fulvio Signore (Dipartimento di Ingegneria dell'Innovazione, Università del Salento)*

A current issue of crucial importance concerns the quality of graduates and the availability of soft skills. The responsibility of educational institutions, such as universities, is to foster the development of soft skills in students in order to promote sustainable resources and contribute to academic and professional success. The present study, stemming from this framework, aims to explore, based on the demand-resource model, how the psychological capital and soft skills of university students can influence the achievement of academic goals. The cross-sectional study used a purposively structured questionnaire filled in by 236 students. The results show a non-significant association between psychological capital and goal attainment. On the contrary, soft skills positively and significantly influence goal attainment and are influenced by psychological capital, thus characterising themselves as crucial mediators for individual development. The conclusions therefore highlight that soft skills, augmented by personal resources, have a positive effect on the achievement of academic goals, so encouraging their enhancement may have strategic implications.

## REPRESENTATIONS OF THE DIGITIZATION PROCESS IN SMES. A QUALITATIVE STUDY ON MANAGERS AND EXPERTS IN THE FIELD

*Clara De Vincenzi (Lumsa Università di Roma), Clara De Vincenzi (Lumsa Università di Roma), Bruna Ferrara (Lumsa Università di Roma), Ilaria Buonomo (Lumsa Università di Roma), Paula Benevene (Lumsa Università di Roma)*

The contribution aims to explore and deepen the issues related to post covid work changes, particularly the procedures and impact of digitalization and the new skills and professional figures required. Indeed, the so-called forced digitization has become necessary to cope with the health emergency and has had a significant impact on work dynamics, organizational systems, and people. Nonetheless, this phenomenon's contours and long-term consequences for organizations and workers are still unclear. Therefore, this research aims to investigate these issues to identify which elements can support the readaptation path to the technological transition of workers and companies. Specifically, 30 participants (SMEs managers, HR managers, and academic experts), distributed heterogeneously throughout Italy, were involved through semi-structured interviews. It was then carried out a thematic analysis of the contents, traceable to the theoretical framework of intellectual capital, with particular reference to human capital (sense of isolation, trust, accountability), organizational (support, logistics), and relational (impact on the territory, external image). During the mini talk, the handout of the poster and some excerpts of the interviews will be made available.



## DETERMINANTS OF THE ORGANIZATIONAL CONFLICT AND CONSEQUENCES ON WORK OUTCOMES: A RESEARCH PROPOSAL FOR THE ASSESSMENT AND ENHANCEMENT OF CONFLICT MANAGEMENT SKILLS

*Alice Garofalo (Facoltà di Scienze dell'Uomo e della Società, Università degli Studi di Enna 'Kore'), Tiziana Ramaci (Facoltà di Scienze dell'Uomo e della Società, Università degli Studi di Enna 'Kore'), Massimiliano Vandi (Altaimpresa), Massimiliano Barattucci (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

The workplace is filled with different degrees of organizational conflict and inability to resolve and face it can negatively impact employee productivity, turnover, and well-being. If, on one hand, conflict is an inevitable part of organizational life since the goals of managers and staff can be at odds, on the other it can also be seen as an alert that indicates that something (in organization or relationships) goes wrong. Among antecedents of workplace conflict, indeed, the literature pointed out the crucial role played by environmental and organizational factors as functioning of the working groups, the rewarding and feedback system, the support of managers, etc. With the aim of developing and testing a conflict model framework, and to identify which conflict management resolution skills can be more functional for each specific determinants issue, a research proposal was designed, involving a sample of Italian employees from public and private sectors. Subsequently, the research intends to focus on the development of specific training programs for conflict management, for managers and supervisors, and on the refinement of the diagnosis of company criticalities based on conflict indicators.

## UMCS-7

*Sophie Gerdel (Università degli Studi di Padova)*

We developed a unidimensional short scale for the measurement of career calling (UMCS-7) and analysed its psychometric properties. The is based on the theoretical model behind the Unified Multidimensional Calling Scale (UMCS; Vianello et al., 2018). Integrating classical and modern conceptualisations of calling, seven dimensions emerged: Passion, Prosociality, Purpose, Pervasiveness, Sacrifice, Transcendent Summons, and Identity. The short scale can be used when time constraints prevent using the original and longer UMCS. Using exploratory and confirmatory factor analysis, the UMCS-7 has been validated in a sample of Italian employees (N = 1246). To estimate measurement invariance across languages, a sample of USA employees (N = 165) was used, which established the equivalence of factor loadings, all but two intercepts, and error variances. The UMCS-7 demonstrated nearly perfect convergent validity, ( $r = .97$ ), excellent internal consistency ( $\alpha_{Italy} = .86$ ;  $\alpha_{USA} = .87$ ) and satisfactory concurrent validity on job satisfaction, life satisfaction, and turnover intentions.

## PERCEIVED VALUE SCALE IN VALUE-BASED HEALTHCARE: CONSTRUCTION AND VALIDATION

*Leda Marino (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Vincenza Capone (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Value-Based Healthcare (VBHC) is an economic framework to improve healthcare organizations effectiveness and efficiency. However, there is a literature lack among the psychosocial perspective of VBHC. The objective is to construct and validate a measurement tool aimed at a perceived value in healthcare from a psychosocial perspective. The scale was constructed after a systematic literature review (Marino and Capone, 2022) and two qualitative studies (January-May, 2021; T-Lab21 software). An items' quantitative pre-test was carried out (April 2022; SPSS26 software) in preparation for the validation that is still in progress. The scale consists of 52 items, three areas (individual, relational, organizational), and twelve sub-dimensions such as competence, team-building, communication, and support. Preliminary analyses have shown good internal reliability and convergent validity. Among limitations, self-report instruments, cross-sectional studies, and snowball sampling. A larger sample is needed to assess the reliability of the scale. Preliminary results aim to fill the gap in the literature and the measurement of VBHC from a psychosocial perspective and identify useful factors to support the process of value co-creation in healthcare with improved care and organizational outcomes.

## LEARNING MINDSET, REFLECTION, AND TOLERANCE FOR UNCERTAINTY. HOW LEADERS EXPERIENCE LEARNING AND DEALING WITH CHANGE. EVIDENCE FROM A QUALITATIVE STUDY

*Roberta Milani (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia), Luca Ghirotto (Qualitative Research Unit, Azienda USL-IRCCS di Reggio Emilia), Ilaria Setti (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia)*

The unprecedented complexity of today's business context increases leaders' need to develop competencies and mindsets to navigate uncertainty and challenges. No study has explored the managers' perspectives about learning and leading change in real working situations in this context. This study aimed to add details to the conceptualization of learning and leading change from leaders' perspective, focusing on the subjective experience. We conducted a qualitative study through interviewing and reflective thematic analysis. Twenty-nine leaders were interviewed. They depicted their daily experiences of learning and dealing with change through three central themes: 1) the development of a learning mindset; 2) the value of reflection; 3) the adoption of approaches and behaviors in their leadership role in unpredictable situations. Findings provided a description of the leaders' experience. Conceptualizing learning and dealing with change based on the subjective experience in the real work-life context may enrich dimensions and contents of constructs already defined in literature. Practical implications in designing leadership development programs and resilience-building initiatives are also discussed.

## THE RELATIONSHIP BETWEEN PERFECTIONISTIC CONCERNS AND SLEEP PROBLEMS THROUGH WORKAHOLISM: WHAT IS THE ROLE OF WORKLOAD?

*Danila Molinaro (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Carmela Buono (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Klara May Salluzzo (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Glauco Cioffi (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Paola Spagnoli (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli')*

According to the Biopsychosocial Model, workaholism is the result of a complex interaction between biological, psychological (e.g., perfectionism), and social/organization (e.g., workload) factors. Furthermore, it is well known that both perfectionists and workaholics may be prone to negative health outcomes such as sleep problems. The present study aims to investigate the relationship between perfectionistic concerns (PC) and sleep problems through workaholism and whether workload moderates the relationship between perfectionistic concerns and workaholism. Model 7 of PROCESS was used to test the model on 387 Italian workers. Overall, the results supported the mediation model. While the effect of PC on workaholism was significant at all three workload levels, the highest score on workaholism was detected at higher levels of both PC and workload. Moreover, at lower levels of PC, highest score on workaholism was detected for higher level of workload. Thus, work overload enhanced the effect of PC. Main limitations are the cross-sectional nature of the study and self-reported measures. Thus, interventions to maintain the level of workload under a certain threshold should be designed and implemented in order to contain the workaholism phenomenon and its health impairment consequences.

## NUDGE INTERVENTIONS IN WORKPLACE ENVIRONMENTS: A SYSTEMATIC REVIEW

*Harriet Pinel (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Edoardo Lozza (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Several studies apply the nudge theory to the household domain and to the individuals as citizens and as consumers. Only a few research focus instead on the use of nudges in organizational contexts, despite the fact that nudges represent a useful, inexpensive, and non-compulsory way to promote behavioural change in the workplace. The purpose of this study is to realize a systematic review aimed at analysing the nudge interventions implemented so far in organizational contexts, in particular focusing on workers' behaviour. The aim is to determine the areas of behaviour that have been investigated so far and the type of nudge used. Results show a prevalence of focus on the health area: most of the interventions aim at improving diets and healthy food choices, increasing physical activity and reducing sedentary behaviour; a few focus on pro-environmental behaviours; a smaller share on improving organizational performance. Regarding the type of nudge implemented the results show heterogeneity. Future research might address this gap in literature about the use of nudge to promote behavioural change in the working environment.

## SUSTAINABILITY GOVERNANCE IN UNIVERSITIES. DEALING WITH RESISTANCES TO SUSTAINABLE TRANSITION

*Alessandra Sacchi (Dipartimento di Psicologia, Università degli Studi di Torino)*

Transition towards sustainability is a main issue of our time: media oversimplifies this concept, but the scientific world addresses it with approaches related to complexity and transdisciplinarity. An important role in this transition is played by organizations, object of study of work psychology, whose importance is growing in the field of sustainability. One of the most suitable bodies to promote sustainable change is the university institution. This study is aimed at analysing data regarding the governance of sustainability implemented in four universities of Piedmont and their regional network: RUS - Piedmont. The topic was explored with semi-structured interviews, that involved 47 people, and with a questionnaire filled-in by 40 participants. Results were analysed within a data co-construction framework, based on process consultation perspective and on grounded theory. The distinctive feature of this work is the theoretical slant of the analysis of the results, based on different approaches of work psychology. Findings of this study are useful to propose ideas to build complex tools for managing sustainability, considering, in addition to technical needs, also cultural, moral, and emotional ones, with particular attention to resistance to change.

## ACADEMIC SELF-EFFICACY AND ITS ROLE IN STUDYHOLISM AND EXHAUSTION IN A NATIONAL SAMPLE OF UNIVERSITY STUDENTS

*Domenico Sanseverino (Università degli Studi di Torino)*

While university students have experienced increased stress, anxiety, and study obsession (studyholism) during the COVID-19 emergency (Aristovnik et al., 2020; Wang et al., 2020; Loscalzo & Giannini, 2021), supportive university environments and academic self-efficacy (ASE) were found to be protective factors (Capone et al., 2020). However, the perception of overstudying could have impaired ASE's protection against studyholism, akin to workaholism (Mazzetti et al., 2014). Following the Job-Demands Resource Model (Bakker & Demerouti, 2007) this contribution examines the moderating roles of study load and professor support on the relationship between ASE and exhaustion, mediated by studyholism. 10298 students from 11 universities (71% females; Mean age 24.24 years) completed a self-report survey concerning various academic and life aspects. Results showed that ASE was partially mediated by studyholism in the negative relationship with exhaustion. Interactions and indirect effects were all negative and significant, showing that ASE plays a protective role for all levels of study load and support. Considering the high scores of both studyholism and exhaustion, prioritizing opportunities to review study strategies could enhance both the perception of positive support and strengthen ASE.



# Psicologia Sociale

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## GENDERED PERSPECTIVES ON HUMAN RIGHTS

*Proponente: Ilaria Giovannelli (Università della Valle d'Aosta)*

People all around the world face discrimination in the enjoyment of their civil and social rights owing to a variety of factors, including gender. In this symposium, through five contributions, we will explore how gender stereotypes, beliefs, and ideologies, may affect people's rights in different contexts. In the first contribution, Spaccatini examined the women's right to freely occupy public spaces looking at how a gendered space conception and sexism affect the social perception of women street harassment. Coppola et al. described two intervention projects aiming at improving prisoners' socio-relational skills in order to promote self-consciousness and awareness of their rights. Lasio et al. examined the right to foster care children showing strengths and difficulties, such as heteronormative practices, experienced by a group of Italian LGBTQ+ foster carers. Giovannelli investigated whether gender stereotyped traits influence symptom etiology and recommendations for medical screenings, obstructing patients' right to proper care. Alemi and Spaccatini experimentally analysed whether the acceptance of a request of sex and the reasons for it may affect the attribution of morality and blame to a woman influencing her right to be recognized as victim.

## THE WOMEN'S RIGHT TO BE IN THE PUBLIC SPACE: GENDERED SPACES AND SOCIAL PERCEPTION OF STREET HARASSMENT

*Federica Spaccatini (Università degli Studi di Milano-Bicocca)*

The detrimental effects of sexism on gender discrimination are well-established. Among the sexist beliefs, scholars have abundantly reflected on the gendered vision of the space, according to which public space (e.g., streets and squares) would be sphere of men. However, the stereotypical association between public space and gender – as well as its social consequences – was never examined empirically. To fill this gap, two correlational studies were carried out to investigate the effects of the gendered vision of the space on social perception of women street harassment (SH). Specifically, it was hypothesized that a stronger association between men and public space would foster exclusion, control and justification of adverse acts towards women in such an environment. Study 1, conducted in Italy (N = 150), showed that participants' sexism predicts their endorsement of gendered vision of the space which, in turn, leads to greater indulgence towards SH. A second cross-cultural study carried out in UK (N = 96) and Turkey (N = 75) revealed that, in both nations, the relationship between gendered vision of public space and compliant coping strategies towards SH was mediated by tolerance for this harassing behavior. Implications and future directions will be discussed.

## AWARENESS OF ONESELF AND ONE'S RIGHTS IN THE PENITENTIARY CONTEXT: EXPERIENCES OF COMMUNITY MEDIATION FROM A GENDER PERSPECTIVE

*Ilaria Coppola (Dipartimento di Scienze della Formazione, Università di Genova), Mara Morelli (Dipartimento di Scienze della Formazione, Università di Genova), Nadia Rania (Dipartimento di Scienze della Formazione, Università di Genova)*

In the penitentiary context, various programs have been implemented over the years for an active participation of the male prison population, favoring the development of individual and group empowerment. On the other hand, the female prison context is different, where the small number of women inmates, instead of being a source of experimentation for innovative models, represents a reason for neglect. This work focuses on two intervention projects carried out in an Italian penitentiary institution for men and one for women, starting from the experience of training and raising awareness of community and peer mediation. The goal is to bring out the development of the socio-relational skills of women and men prisoners, with a view to greater self-awareness and, therefore, awareness of their rights. The data was collected through observation sheets, writing reflective diaries and focus groups. The data that emerged make us reflect on the need to implement intervention projects that see the active involvement of inmates, men and women, with a view to greater self-awareness and awareness of their rights, thus promoting the development of individual and community empowerment.

## CHALLENGES, EXPERIENCES AND SILENCED RIGHTS OF ITALIAN LGBTQI+ FOSTER CARERS

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Although research have established that parents' sexual orientation do not matter for the well-being of children, fostering and adoption by LGBTQI+ people remains a contested area of social work. LGBTQI+ individuals are subject to discriminatory legislation, and heteronormative practices question their suitability to parent. In Italy, while the law only allows heterosexual couples access to adoption, no restrictions are placed on the sexual orientation of the foster carers. However, fostering by LGBTQI+ people is an unexplored topic in the country, even though the first juvenile court decrees of fostering by lesbian and gay people date back to 2013. This paper reports the results of an ongoing study aimed at analysing the experiences of a group of Italian LGBTQI+ foster carers. Ten couples responded to a semi-structured interview on how social workers, foster children and their birth families, and other community settings responded to their sexual orientation. The discourse analysis highlighted a prevalence of positive experiences among participants. However, some examples of heteronormative practices, and difficulties on how to deal with potential homonegativity were reported. Recommendations for the recruitment, assessment and support of LGBTQI+ foster carers are discussed.

## THE RIGHT TO BE TRUSTED WHEN YOU'RE SICK: THE EFFECTS OF GENDER STEREOTYPICAL TRAITS ON LAYPEOPLE'S ILLNESS REPRESENTATION

*Ilaria Giovannelli (Dipartimento di Scienze Umane e Sociali, Università della Valle d'Aosta)*

Studies realized to deepen laypeople's illness representation have found that patients' sex may affect diseases' etiology and suggestions for medical care. Results showed that laypeople are more likely to shift from an organic to a psychogenic interpretation of symptoms and are less likely to suggest medical screenings when patients are female rather than males, especially when stressful events are present in sufferers' life. Even if sex may be implicated in disparities between women and men in medicine, some authors suggested that feminine and masculine personality traits may increase risk of poor access to care. To test this hypothesis, we conducted an experimental study (N = 140) analyzing whether patients' sex (male vs. female) and feminine (vs. masculine) traits may affect illness etiology and suggestions to undergo health screenings. The cultural beliefs about masculinity and femininity were examined. Findings showed that feminine traits increase the likelihood of attributing the illness etiology to psychological factors which, in turn, increases the suggestion for psychological screenings. Results confirmed that physical symptoms are misinterpreted when patients showed feminine traits and suggest many directions for gender equality in medicine sector.

## SEXTORTION: WHEN THE RIGHT TO BE RECOGNIZED AS A VICTIM IS QUESTIONED

*Marylisa Sara Alemi (Dipartimento di Scienze Politiche, Università degli Studi di Perugia), Federica Spaccatini (Università degli Studi di Milano-Bicocca)*

Sextortion – the abuse of organizational power to obtain a sexual benefit or advantage – is a relatively new and unexplored phenomenon, which could be defined as a gendered form of corruption. The difficulty of reporting dynamics, combined with the victim-blaming reality, are surely some major reasons why this is such a submerged and hidden topic. Nevertheless, sextortion cases occur all around the globe and in different contexts. In this framework, we will introduce the results of an experimental study aimed to investigate the general perception of a sextortion's victim in the public administration's field. Participants ( $n = 291$ ,  $f = 263$ ,  $M_{age} = 27.33$ ,  $SD = 6.52$ ) were asked to read a scenario describing a woman going to a public office in order to ask for a travel visa; the duty officer in service asked her for sex in exchange for quickly getting this document. According to the experimental condition, we varied the motivation of the trip (work vs. health) and the acceptance (vs. refusal) of the duty officer's request of sex. The results highlighted how, regardless of the motivation of the trip, the victim was perceived as less moral and more blameworthy when she consented to the sexual request.

## PATHWAYS TO OPENNESS TOWARDS OTHER CULTURES AND GROUPS

*Proponenti: Jessica Boin (Università degli Studi di Padova), Giulia Fuochi (Università degli Studi di Padova)*

As societies become more multicultural and diverse, an open and accepting view of other groups is of pivotal importance to promote integration and intergroup harmony. This symposium addresses different ways to build a broad-minded view of other cultures and groups. The first contribution shows how cultural and group deprovincialization scales are associated with various dispositional (SDO, RWA, dispositional curiosity) and intergroup variables (intergroup contact, intergroup anxiety, prejudice). The second contribution shows that the positive association between intergroup contact with one outgroup and attitudes toward that outgroup can generalize to other groups through higher deprovincialization, operationalized as reduced moral distance between groups. The third contribution shows that having a humble approach towards people with different cultural backgrounds (cultural humility) can improve intergroup relations. The fourth contribution shows that the positive effect of having a closed mindset (high need for cognitive closure) on acceptance of stereotypes becomes negative when people receive positive and stable information about the outgroups. Theoretical and practical implications of the findings for improving openness towards other cultures and groups will be discussed.



## THE TWO SIDES OF DEPROVINCIALIZATION: HOW CULTURAL AND GROUP DEPROVINCIALIZATION ARE RELATED TO DISPOSITIONAL AND INTERGROUP VARIABLES

*Jessica Boin (Università degli Studi di Padova), Giulia Fuochi (Università degli Studi di Padova), Alice Lucarini (Università degli Studi di Padova), Alberto Voci (Università degli Studi di Padova)*

Deprovincialization is a worldview characterized by openness toward and acceptance of other cultures and groups and the abandonment of an ingroup-centric perspective. This study delves deeper into the deprovincialization construct by testing: (1) whether the Cultural Deprovincialization scale and the Group Deprovincialization scale represent two separable or non-separable sides of the construct; (2) how Cultural Deprovincialization and Group Deprovincialization are placed in a network of relevant dispositional and intergroup variables, in which the outgroup is immigrant people. We collected self-report data in a convenience sample of Italian adults ( $N = 770$ ) and performed confirmatory factor analyses (CFA) and network analyses. Results showed that: (1) Cultural and Group Deprovincialization are two correlated ( $r = .65, p < .001$ ) but separate sides of deprovincialization, loading on a higher-order deprovincialization factor with satisfactory CFA fit indexes; (2) both deprovincialization scales are linked to dispositional curiosity, positive contact experiences, and lower levels of intergroup anxiety, SDO, RWA and prejudice; however, Cultural Deprovincialization is more central and closer to contact experiences than Group Deprovincialization, which is instead closer to SDO and RWA.

## SECONDARY TRANSFER EFFECT AND MORAL DISTANCE AS A FORM OF DEPROVINCIALIZATION

*Alessia Cadamuro (Dipartimento di Scienze Biomediche, Metaboliche e Neuroscienze, Università degli Studi di Modena e Reggio Emilia), Loris Vezzali (Università degli Studi di Modena e Reggio Emilia), Gian Antonio Di Bernardo (Università degli Studi di Modena e Reggio Emilia), Shelley Mckeown (University of Bristol, UK)*

The secondary transfer effect consists in the generalization of contact effects from prejudice reduction toward the outgroup individuals have contact with (primary outgroup) to outgroups uninvolved in contact (secondary outgroups). The explanation of why such an effect occurs is however unclear, and mostly based on attitudes toward the primary outgroup as the main explanatory mechanism. Another relevant candidate, deprovincialization, has received mixed support, possibly due to how this has been operationalized (generally, as reduced levels of ingroup identification or ingroup attitudes). We propose a novel operationalization based on the construct of moral distance. To test hypotheses, we conducted three studies (two in Italy, one in UK) evaluating whether majority groups' contact with minority groups generalized to secondary outgroups via reduction in moral distance toward both primary and secondary outgroups. Results provided strong support for moral distance as the underlying process of the secondary transfer effect. Collective action toward the primary outgroup emerged as an additional mediator; scarce evidence emerged for attitude generalization as the mediating process.

## HUMBLE AND KIND: THE ROLE OF CULTURAL HUMILITY FOR IMPROVING INTERGROUP RELATIONS

*Emilio Paolo Visintin (Università degli Studi di Ferrara), Marika Rullo (Università degli Studi di Siena), Calogero Lo Destro (Università degli Studi Niccolò Cusano)*

Cultural humility implies keeping an other-oriented, humble approach toward people with different cultural backgrounds, and has its roots in awareness of structural privileges and lack of superiority toward other cultures. This research program investigates the role of cultural humility for improving intergroup relations. Throughout the studies participants were Italian nationals, and immigrants and/or religious minorities were the outgroup. The first correlational study showed that cultural humility buffered the association between social dominance orientation and prejudice. The second correlational study showed that cultural humility buffered the association between opportunities for contact and negative contact, which was positive only for respondents with low cultural humility. Instead, positive contact was associated with reduced prejudice mainly for respondents with low cultural humility. The third experimental study integrated the imagined intergroup contact paradigm and cultural humility. Instructions eliciting cultural humility during the imagined interaction reduced intergroup anxiety compared to a standard imagined contact condition and a control imagination task. The contribution of cultural humility for positive intergroup relations will be discussed.

## THE NEED FOR COGNITIVE CLOSURE CAN INFLUENCE THE ACCEPTANCE (AND REJECTION) OF STEREOTYPES AS SOURCES OF STABLE AND CERTAIN INFORMATION

*Conrad Baldner (Sapienza Università di Roma), Antonio Pierro (Sapienza Università di Roma)*

Prejudice can be motivated not just by the content of specific beliefs but also by individuals' need for cognitive closure (NCC; Kruglanski, 2004), or the desire for stable and certain knowledge. We posited that individuals characterized by an NCC would be attracted to various stereotypes, and consequently prejudice, as stereotypes represent stable and certain beliefs; they resist change and provide information, albeit biased and inaccurate, about large groups of people. However, we posit that the relationship between NCC and stereotype acceptance is due to stereotypes' perceived stability and certainty. Accordingly, the NCC could be associated with less acceptance of stereotypes and prejudice when individuals have access to positive information that is relatively stable and certain. We will discuss five published articles which provide evidence for these points. First, Baldner and Pierro (2019a, 2019b) and Baldner et al. (2021) found that NCC had effects on assessments of prejudice towards both women managers and immigrants. Second, Baldner and colleagues (2020, In Press) found that the NCC had a reversed effect on acceptance of stereotypes towards the above groups when the stereotype-relevant information was manipulated. Implications of these results will be discussed.

# REPRESENTATIONS OF THE SOCIAL: A FOCUS ON HEALTH AND ENVIRONMENT

*Proponente: Sonia Brondi (Università Ca' Foscari Venezia)*

Social psychology has more and more voice in the common challenge of finding a solution to the pressing global and local issues that characterize our age, such as, for example, climate change and pandemics. The crucial contribution of the discipline is evident not only on the international scene but also in Italy, where the scientific community has gradually grown and consolidated over the years. The theory of social representations has proved to be a valuable interpretative framework for relevant social phenomena. From its premises to its most recent and articulated developments, the theory has shown that it provides compelling interpretations of topical issues debated in society and concrete proposals on the application level. This symposium thus aims to offer a sharing space for scholars and researchers in the field of social representations, who are turning their reflections towards two of the most promising emerging areas of social psychology, namely health psychology and environmental psychology. By gathering contributions from authors with different academic profiles and affiliations, the symposium intends to initiate a fruitful dialogue around the state of the art of research on health and the environment through the theoretical lenses of social representations.

## IS THERE ANYONE IN THERE? DIVERGING AND CONVERGING REPRESENTATIONS OF THE VEGETATIVE STATE IN THE CAREGIVERS AND PRACTITIONERS' DISCOURSE

*Edoardo Zulato (Università degli Studi di Milano-Bicocca), Lorenzo Montali (Università degli Studi di Milano-Bicocca)*

By creating a liminal space between life and death, the vegetative state troubles traditional caring roles and practices. Through the lens of social representations and positioning theories, we investigated how family caregivers and practitioners positioned the patient and themselves within the healthcare community. We conducted 65 semi-structured interviews with 35 relatives and 30 health professionals/social workers. Our discourse analysis identified three different discourses to position the patient: organic, interactional, and possibilistic. Their encounter leads to the construction of both diverging and converging representations. By employing either an organic or an interactional discourse, professionals and relatives diverge in representing the patients as residually aware. Conversely, by using a possibilistic discourse, they converge toward the common ground of balanced hope, representing the patient as neither unambiguously aware nor straightforwardly unaware. In this space of possibilities, caregivers justify their monitoring and stimulation activities and take on the role of spokesperson for the patient. As a result, this common ground allows them to communicate, justify their reciprocal action and acknowledge their roles and expertise in taking care of the patient.

## DISCUSSING VACCINE AND AUTISM IN A MAINSTREAM NEWSPAPER IN ITALY: A THEMATIC ANALYSIS

*Monica Pivetti (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Silvia Potì (Dipartimento di Scienze dell'Educazione, Università di Bologna)*

Over the past few years, there has been a great deal of concern regarding the potential links between childhood vaccinations and the development of ASD, possibly leading to “vaccine hesitancy”, defined as a delay in acceptance/refusal of vaccination despite the availability of vaccination services. Specifically, the degree of belief in the vaccine–autism linkage was found as the major factor associated with a delay/omission of one or more vaccines. According to the study of the press, media play a crucial role in channelling health-related information and significantly influence health behaviours. This study aims to explore the representational field related to the vaccine-autism link in a mainstream Italian newspaper. We analysed articles published on La Repubblica, from January 2009 until January 2017 (N = 168 articles), via T-Lab software. The analysis produced four clusters: a) Trust and sense of belonging (bigger cluster); b) Judgment dimension (parents getting compensated for their children’s sickness, which allegedly stemmed from the vaccine); c) Catastrophic narratives (leading to a sense of fear and danger); d) Organization of the public healthcare system (smaller cluster). The study underlines the need to monitor media coverage on key healthcare topics.

## THE SOCIAL CONSTRUCTION OF RISK: REPRESENTING COVID-19 RELATED RISK VIA WHATSAPP

*Valentina Rizzoli (Dipartimento di Comunicazione e Ricerca Sociale, Sapienza Università di Roma), Bruno M. Mazzara (Dipartimento di Comunicazione e Ricerca Sociale, Sapienza Università di Roma)*

Even in front of risk awareness, there is not always the willingness to act or to change one's lifestyle habits by responding effectively. Understanding the social construction of risk (SCR) can help to grasp this gap. This means, in the social representation (SR) theory, to approach the complexity of the meanings made of risks by people positioned within specific social contexts, and conceptualise lay readings of risk as forms of thinking based on common sense and generated in communication. During the COVID-19 pandemic, in particular in the lockdown periods, social media have become a privileged medium for interpersonal communication. Social media contribute to the SCR both by fostering the circulation of existing SRs of risks, and interpersonal interactions, also becoming means of construction. The present contribution aims at exploring the SCR related to the COVID-19 pandemic starting from the analysis of informal exchanges via WhatsApp, collected during the first part of 2020 and one year later (12936 exchanges). First, the content of SR has been analysed through a topic detection technique. Then emotional objectification and anchoring have been individuated. Results will be discussed reflecting on the role of SRs in preventing or fostering effective responses to risk.



## TOURISM AND SUSTAINABLE DEVELOPMENT: A CONTRIBUTION FROM THE SOCIAL REPRESENTATIONS THEORY

*Alessandro Meneghini (Università degli Studi di Padova)*

This contribution is part of a project that is inquiring the relationship between sustainable development and tourism, using the social representations theory. Specifically, the present contribution is focusing on how the documentation on sustainable development and tourism is providing elements to the social representations. Documents on sustainable development and tourism were collected, specifically policies, strategic plans, congress reports, best practices, project reports, evaluations and impact assessments. Documents were identified considering an international perspective, but also identifying 3 specific areas (Italy, another EU country, one extra-European country) for a direct comparison. Quantitative content analysis of the collected documents was carried out, identifying the main topics, the common points and specificities between the key themes of development and tourism, both from the international and the regional perspective. The results also identify potential themes to be investigated in depth through other methods of data collection, like interviews with the actors directly involved in the touristic initiatives.

## “JUST FOR WHOM?” SOCIAL REPRESENTATIONS OF ENVIRONMENTAL JUSTICE IN TWO COMMUNITIES TARGETED BY THE JUST TRANSITION FUND

*Sonia Brondi (Università Ca' Foscari Venezia), Fulvio Biddau (Università degli Studi di Padova), Ester D'oria (Università degli Studi di Padova)*

The Just Transition Fund (JTF) is an EU financial tool to support communities affected by the socio-economic challenges of the transition toward climate-neutral societies. It requires the proposal of Territorial Plans, arising from the dialogue between institutional representatives and a territorial partnership of public and private actors, including citizens. Drawing upon this institutional framework, this contribution aims to investigate the social representation of justice, and -specifically- of environmental justice, shared by the members of the beneficiary communities of the Fund. We focus on the two Italian areas targeted by the JTF: the Sulcis Iglesiente and Taranto, highly dependent on mining and carbon-intensive industries and thus in need of innovative development visions and projects. The in-depth analysis of interviews conducted with key local actors (e.g., administrators, workers, trade unionists, activists) allows us to highlight a multifaceted representation of justice, which includes -but does not end in- the types of justice widely acknowledged in the literature (e.g., distributive, procedural, sense of justice). This highlights some clashes between macro and local views with implications for effective policy design and planning.

## THE NEW CHALLENGES OF LEGAL PSYCHOLOGY IN ADDRESSING SOCIAL, METHODOLOGICAL, ETHICAL AND LEGAL CHANGES

*Proponenti: Daniela Pajardi (Dipartimento di Studi Umanistici, Università di Urbino), Patrizia Patrizi (Università degli Studi di Sassari)*

Legal psychology is a discipline that has developed an interdisciplinary competence to interact with the law, to frame and answer questions in court, to define intervention projects and methodological tools that respond to the specificities of this context. The symposium aims to discuss some of the most current and innovative topics on which legal psychology has been involved and to address which it has developed theoretical approaches, research, forensic expert methodology and psycho-social intervention. Topics concerning both the judicial and social contexts will be presented and discussed, such as the assessment of suggestibility in minors suspected victims of sexual abuse, the impact of the reform of family law on the expert activity, the “incel” phenomenon as new form of risk of violence, and the perspective of restorative justice as a possibility of change in community relations between the perpetrator, victim and society. Any activity of the legal psychologist must carefully pay attention to method and ethics: both the cases of deontological violation will be analyzed and how legal psychology can intervene, promoting professional training and research.

## THE INCEL PHENOMENON: CONNECTIONS WITH GENDER-BASED VIOLENCE

*Letizia Caso (Lumsa Università di Roma), Irene Aiolfi (Lumsa Università di Roma), Nicola Palena (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Involuntary celibates (incels) define themselves as unable to find romantic and sexual relationships due to genetic, cultural and social causes. They hold violent and misogynistic beliefs and have been linked to terroristic attacks. Empirical literature contribution to the incel phenomenon is sparse; thus, this project aims to fill the gap and improve its knowledge. The inceldom grade was measured in an Italian sample using an adapted version of Passmann's Degree of Inceldom scale. Among the 149 subjects recruited, 33 were self-declared incels, also confirmed through a manipulation check. The internal consistency of the adapted scale was good ( $\alpha=0.886$ ). After an independent sample t-test, the inceldom total score mean was higher for self-identified incels ( $M= 3.25$ ,  $SD=1.08$ ) than the other group ( $M= 1.63$ ,  $SD=0.693$ ). Since the sample groups were uneven (non-incels=116; incels=33), the same analyses were run with evened groups: 33 non-incels participants were randomly picked. The results still stood significant. The difference between groups in terms of inceldom degree was supported. This study is a good starting point towards validating Passmann's scale, suggesting that the instrument may be well responsive to the Italian population and could be used as an incels-detection tool.

## LEGISLATIVE REFORMS AND PROMOTION OF A DIFFERENT CONFLICT CULTURE: A NEW CHALLENGE FOR THE RESEARCH AND ACTIVITY OF THE LEGAL PSYCHOLOGIST

*Daniela Pajardi (Dipartimento di Studi Umanistici, Università di Urbino), Patrizia Patrizi (Università degli Studi di Sassari)*

Legal psychology, due to its disciplinary identity, pays constantly attention to legislative reforms and changes in the social perception of justice and conflict. The paper will analyze some changes in family law and criminal justice. The family law reform indicates legal psychology as a point of reference for technical advice, outlines some critical issues, on which the discipline must promote further theoretical and methodological research, and emphasizes the promotion of a management of the conflict and culture of mediation. In the criminal field, this greater sensitivity of the juridical world towards a resolution of conflicts and of the opposition between the parties translates into a great attention to restorative justice. The voluntary adhesion on the part of the perpetrator of the prejudice and of those who have suffered it to practices of restorative justice, with the involvement of the community, gives voice to the protagonists, constituting an object of interest both in regulatory reforms and in the practices of legal practitioners and of the social sciences. A true culture of mediation and reparation must avoid only formal interventions and promote a wider cultural change on damage and conflict in the different contexts of coexistence.

## THE DIFFERENT 'RESISTANT BEHAVIORAL RESPONSES' ON INTERROGATIVE SUGGESTIBILITY IN CHILDREN AND ADOLESCENT IN THE LEGAL CONTEXT

*Monia Vagni (Università di Urbino), Tiziana Maiorano (Università di Urbino), Valeria Giostra (Università di Urbino)*

Several studies showed that children are less suggestible with increasing age and high intellectual abilities. Children may have different levels of resistance in answering to unanswerable questions. The aim of this study was to investigate the protective efficacy of different types of resistant behavioral responses (RBR) to unanswered questions and pressures related to immediate and delayed suggestibility. The study recruited 360 children between 7 and 17 years, of whom 180 were sexual suspected victims examined in the legal setting, and 180 age, sex and IQ matched controls. All participants completed the GSS2 for both immediate and delayed suggestibility. The study analyzed the contribution of each resistant behavior response to the overall variance in the efficacy of resistance to the factors of interrogative suggestibility. The results show that the "don't know", "direct explanation" and "no" responses are unrelated response styles that have individual effects on resistance to misleading questions. "Direct explanation" responses are more stable and robust and increase incrementally with age in children, while "no" responses decrease. The results suggest that the "don't know", "direct explanation" and "no" responses are driven by different cognitive and social processes.

## WHEN DO PSYCHOLOGISTS FAIL TO MEET ETHICAL AND DEONTOLOGICAL REQUIREMENTS? - THE NATURE OF DISCIPLINARY DEONTOLOGICAL CASES IN FORENSIC PSYCHOLOGY

*Georgia Zara (Dipartimento di Psicologia, Università degli Studi di Torino)*

The recognition of psychology within the justice system has expanded considerably in recent decades, and psychologists have made important contributions to addressing issues related to juvenile and family law and, to some extent, criminal law that would otherwise have been disregarded. However, research shows that the area that seems to generate much of the ethical and deontological controversy is the forensic area, where the application of accurate, specialised, and evidence-based methodology consistent with good practice and respectful of psychology's code of ethics is sometimes ignored or, at best, only partially considered. This paper explores the scenarios in which psychologists, appointed as expert witnesses, fail to meet these requirements. This leads to an escalation of conflicts and to methodological and assessment errors with serious consequences for people's lives. In a society where expert knowledge seems to be commonplace, it is important to distinguish relevant testimony from simple information.

# REPRESENTATIONS OF THE SOCIAL: A FOCUS ON METHODS AND OBJECTS

*Proponente: Roberto Fasanelli (Università degli Studi di Napoli Federico II)*

To continue the well-established tradition, inaugurated by Ida Galli on the VII National Congress of the AIP (Genoa, September 2006), this symposium is dedicated to collecting the most recent national contributions, able to account for the liveliness and vitality of Serge Moscovici's Theory of Social Representations. More than sixty years after its birth, this theory is still a fruitful frame of reference for those who do not see society as a mere container of information but rather as the place where it takes on significance thanks to the daily symbolic exchange operated through the most varied media and languages. In other words, society is not a source of information, but of meanings. People, on topics of interest, construct questions and look for answers, rather than merely perceiving and processing obtained information. Social psychology, therefore, cannot concern itself with how much a disturbing phenomenon explanation is wrong or correct, whether it is true or false, but must deal with how ordinary people construct social knowledge of that phenomenon, more precisely, how they represent it. The contributions collected in this symposium testify to the variety of the objects investigated, as well as to the creative multiplicity of the methods chosen.



## SOCIAL REPRESENTATIONS OF MIGRATION IN POSTCOLONIAL ITALIAN LITERATURE A QUALI-QUANTITATIVE ANALYSIS OF LITERARY TEXTS BY ASIAN AUTHORS

*Giacomo Chiara (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Diego Romaioli (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Alberta Contarello (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

Several studies inquired social representations of migration in Italian mass-media (Mannarini et al., 2020; Mazzara et al., 2020; Montali et al., 2013) and multicultural society (Mancini et al., 2007), however, the migrants' perspective is underrepresented (Jacomella, 2015). The use of literary texts as a source of data for psychosocial research is not widespread, although studies and reflections showed their potentials (Contarello, 2008; Moscovici, 1986; Volpato & Contarello, 1995). The present contribution explores the social representations of migration through the analysis of 29 texts by writers of Asian origin. Specifically, a hierarchical descendent analysis was carried out on the texts according to the Reinert method (1983), using the software IRaMuTeQ. The results show two macro-classes subdivided into eleven distinct lexical worlds, with contents referring to labor exploitation, migratory journey, family and religious tradition, racism, and war. Some narratives on daily life, on psychological aspects, and on the possibility of choosing one's own destiny beyond family and religious traditions emerge as a contrast to the idea of the migrant as a victim. In conclusion, the contribution aims to emphasize the relevance of literary texts in psychosocial research.

## ONLINE TEEN DATING VIOLENCE: METHODS FOR NEW REPRESENTATION AMONG TEENAGEERS

*Immacolata Di Napoli (Università degli Studi di Napoli), Valentina Manna (Associazione Roots in Action), Oscar Pisanti (Associazione Roots in Action), Barbara Agueli (Università degli Studi di Napoli Federico II)*

Cyber dating abuse is a part of more general cyberviolence. Cyberviolence is not a separate phenomenon to 'real world' violence, as it often follows the same patterns of offline violence. (EIGE, 2017). Cyberviolence is a type of gender-based violence perpetrated through electronic communication and the Internet. It can affect both women and men but, women and girls experience different and more traumatic forms of cyberviolence, including cyberstalking, non-consensual sharing of intimate photos/videos, revenge porn, blaming and harassment for sex, slut-shaming. Thirty students selected on a voluntary basis from five high schools located in the Naples area were involved in the project CTRL+ALT+DEL – funded by EU Commission -, to spread knowledge about Online Teen Dating Violence (OTDV) by providing, at the same time, an experience of construction of new representations. The teenagers became active promoters of knowledge among peers, being the main creators and responsible of an innovative tool to raise awareness around the themes of the project in a wide audience. # Error405 is the social awareness campaign defined by the students involved on the issues of the OTDV, it will be also presented.

## SOCIAL REPRESENTATION OF FAMILY: A COMPARATIVE STUDY ON ITALIAN YOUNG AND OLDER ADULTS

*Adriano Mauro Ellena (Centro di Ricerca sullo Sviluppo di Comunità e i Processi di Convivenza, Università Cattolica del Sacro Cuore di Brescia - Università Cattolica del Sacro Cuore), Maura Pozzi (Centro di Ricerca sullo Sviluppo di Comunità e i Processi di Convivenza, Università Cattolica del Sacro Cuore di Brescia - Università Cattolica del Sacro Cuore), Elena Marta (Centro di Ricerca sullo Sviluppo di Comunità e i Processi di Convivenza, Università Cattolica del Sacro Cuore di Brescia - Università Cattolica del Sacro Cuore), Sara Damia Martinez (Centro di Ricerca sullo Sviluppo di Comunità e i Processi di Convivenza, Università Cattolica del Sacro Cuore di Brescia - Università Cattolica del Sacro Cuore)*

Italian society is well known for its traditionalist and conservative features, mainly when it comes to family. Nevertheless, the emergence of the so-called non-traditional families is bringing new and interesting social challenges. The scientific and political debates on this issue are thus becoming very intense. The present contribution takes as a reference the theory of social representations and, in particular, the central nucleus theory with the aim of evoking the social representation (SR) of family in two different Italian groups: 220 young adults (age range: 18–36) and 83 adults (age range: 37–70). A semi-structured questionnaire divided into two sections was used featuring an open question (content) and a task of free associations based on the technique of hierarchical evocations (structure). Content analysis and representational structure analysis were applied. Results show differences in the SR of family in the two examined groups. Young adults consider family as mainly characterized in an affective way evoking sentimental features. Conversely, adults declined family as a structure supported by positive values, highlighting its pragmatic and concrete characteristics. Reference to non-traditional family nuclei emerged prevalently in the group of young adults.

## SOCIAL REPRESENTATIONS OF PEACE IN TIMES OF WAR: WHICH VOICES SHOULD BE SILENCED?

*Mauro Sarrica (Sapienza Università di Roma), Giovanna Leone (Sapienza Università di Roma), Bruno Mazzara (Sapienza Università di Roma)*

Developmental, discursive and social representations research on the conceptions of Peace and War largely suggest an imbalance between the two. The understanding of war seems to precede those related to peace, and its representations seem to be far more concrete. Peace is first conceived in negative terms - absence of war -, then as symbols or inner state of calm and joy, and only to a lesser extent as positive peace - action for nonviolent conflict transformation. From a social representations perspective, this underlines a fundamental problem for peace activists: how to foster social representations of positive peace, and make them hegemonic? From these premises, the present contribution will reflect on the representations of peace and pacifism in the public debate during the first month of the Russo-Ukrainian war. In particular, through an exploratory research carried out on articles published in major international newspapers, we will reflect critically on the relationship between power, hegemonic representations and silencing of polemical representations.

## SWOT ANALYSIS DIMENSIONS AS GROUP REPRESENTATIONS: AN EPISTEMO-METHODOLOGICAL INTEGRATION

*Roberto Fasanelli (Università degli Studi di Napoli Federico II), Alessia Tuselli (Università di Trento), Ida Galli (Università degli Studi di Napoli Federico II)*

In recent years, there has been a lively research activity around the SWOT analysis, which has become transversal to the fields of application, probably under both a re-articulation of business mechanisms related to the changed socio-economic scenario, and of the emphasis placed on European planning on evaluation processes and, above all, on context analysis. This technique, however, is not immune to criticism. The most important is that it only generates undifferentiated lists, devoid of useful indications for tackling the deficiencies identified. Moreover, the clusters of elements resulting from the analysis aren't interrelated. The overall objective of this study is to improve the usability of the SWOT analysis. The ultimate goal is to create a procedure that can overcome its limitations by integrating it with the structural approach to Social representations and the Hierarchized evocations technique. These integrations, by using Similarity analysis and Cognitive salience index, will allow researchers to identify weight, role, and interdependence in respondents' cognitive-affective orientations about each SWOT factor.

# SOCIAL PSYCHOLOGICAL FACTORS UNDERLYING SCIENCE PERCEPTION

*Proponente: Marco Brambilla (Università degli Studi di Milano-Bicocca)*

Scientific knowledge informs behavioral strategies to face the society's well-being. Thus, studying the factors that determine how science is perceived represents a prominent research goal. In this symposium, five contributions will present new insights into the psychological factors influencing science perception. Brambilla and co-authors investigate how scientist's facial features bias the opinion about the quality of scientific research. The second and the third contribution address how individual differences influence science perception. Thus, Giacomantonio and Pellegrini show that the endorsement of conspiracy theories induce negative attitudes toward vaccination. Suitner and co-authors reveal that conspiratorial beliefs are a key defence mechanism preventing people from trusting health recommendations. The fourth and the fifth contributions investigate the implications of science perception. Thus, in the fourth contribution, Ballone and co-authors show that the tendency to moralize scientific contents induces intergroup dehumanization. In the fifth contribution, Cena and co-authors show that trust in science predicts attitudes toward democracy. The five contributions reveal the importance of taking into account psychological factors when studying science perception.

## FACIAL APPEARANCE AFFECTS SCIENCE PERCEPTION

*Marco Brambilla (Università degli Studi di Milano-Bicocca), Simone Mattavelli (Università degli Studi di Milano-Bicocca), Simona Sacchi (Università degli Studi di Milano-Bicocca)*

Recent has shown that scientists' face affects science perception such that scientists who appear competent and trustworthy create a stronger impression of doing high-quality research. Here, two experiments (N= 154) investigated whether scientist's facial width-to-height ratio (fWHR) biases the opinion that individuals form about the quality of the scientists' research. fWHR is a static face structure that is measured as the ratio between bizygomatic width and upper face height and generally interpreted as wider, shorter faces. Participants were exposed to 10 large and 10 narrow male faces (Experiment 1) and both male and female faces (Experiment 2) borrowed from the Chicago Face Database and were told that each person shown on the screen was a scientist. Participants were asked to rate each scientist on a number of traits based on their facial appearance and indicate how much the scientist looked like someone who conducts scientifically valid research. Results showed that narrow-faced male and female scientists were evaluated as more competent and trustworthy and created a stronger impression of doing scientifically valid research. Thus, our work shows that science is a social activity whose perception may be biased by morphological characteristics of the human face.

## INCOMPATIBLE WITH THE NATURAL ORDER OF THINGS: COVID PANDEMIC AND ATTITUDE TOWARDS THE VACCINE

*Mauro Giacomantonio (Sapienza Università di Roma), Valerio Pellegrini (Sapienza Università di Roma)*

In this work we will examine the relationship between conspiratorial beliefs and attitudes towards vaccines in the context of the COVID-19 pandemic in Italy. In particular, we will advance that those conspiratorial beliefs are associated with negative evaluations of vaccines designed to contrast COVID-19 infection. Furthermore, it was hypothesized that the strongest conspiratorial beliefs are associated with the tendency to frame the pandemic outside the “natural order of things”, that is, a broad set of expectations regarding how life and the world more in general should function. More specifically, an unsettling and frightening event such as the pandemic could be perceived as inconsistent with the natural order of things. This, in turn, could favor the use of conspiracy theories to restore a sense of order and predictability. The research sample consisted of 565 Italian participants, residing in different geographical areas of the country. The data was collected in the midst of the pandemic emergency, just after the beginning of the vaccination campaign (February 2021). The hypotheses were tested using a path analysis model that provided empirical support to our expectations.



## CONSPIRACY THEORIES AS A DEFENSE MECHANISM: ITS CONSEQUENCES FOR VACCINE INTAKE

*Caterina Suitner (Università degli Studi di Padova), Bruno Gabriel Salvador Casara (Università degli Studi di Padova), Rossella Del Rio (Università degli Studi di Padova)*

Why do we believe in conspiracy? In this work we try to give a possible answer by combining the psycho-social perspective with the psycho-dynamic one, establishing a relationship between conspiracy beliefs and the main primary defense mechanisms (denial, omnipotent control, projection, splitting, devaluing idealization). The basic idea is that conspiracy theories offer answers that wink at the traditional mechanisms deployed to protect our psyche, which are brought into play in moments of uncertainty and difficulty and which then influence important decisions. We apply this analysis to the context of conspiratorial explanations related to the COVID-19 pandemic, and to one of the most central decisions in this area: whether to vaccinate or not. Through a scale developed ad hoc for this purpose and compiled by 1420 respondents, the study offers a first initial confirmation of the usefulness of a psycho-analytical structuring of conspiracy beliefs to understand their concrete effects, in particular with respect to the behavior of get vaccinated.

## MORALIZATION OF ATTITUDES TOWARDS VACCINE AGAINST COVID-19 AND OUTGROUP DEHUMANIZATION

*Chiara Ballone (Università degli Studi G. d'Annunzio di Chieti-Pescara), Maria Giuseppina Pacilli (Università degli Studi di Perugia), Riccardo Palumbo (Università degli Studi G. d'Annunzio di Chieti-Pescara), Stefano Pagliaro (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Attitudes towards socially sensitive topics tend to be polarized. This polarization is usually manifested through the tendency to connote one's position in moral terms. Moral evaluations are fundamental in relation to intergroup dynamics: in the political arena people tend to consider their group different from the outgroup in moral terms, and this perceived distance produces discrimination against the outgroup. The present correlational study (N=234) aimed to examine the intergroup dynamics between Pro-vax and No-vax in relation to the vaccine against the Sars-Cov-2. Results showed a positive association between the strength of the attitude towards the COVID-19 vaccine –a proxy of identification with the ingroup - and the tendency to moralize it. Furthermore, this attitude moralization was positively associated with the perceived moral distance between ingroup and outgroup, and the latter positively associated with the outgroup dehumanization. A sequential mediation showed a significant indirect effect that links the strength of the attitude to dehumanization through the process of attitude moralization and the perception of moral distance between groups. Results are discussed in the light of theories on attitudes moralization and its importance in institutional communication

## DO TRUST IN INSTITUTIONS AND SCIENCE PREDICT PREFERENCE FOR A TECHNOCRATIC GOVERNMENT? A ROLLING CROSS SECTION MULTILEVEL STUDY DURING THE COVID-19 PANDEMIC

*Lorenzo Cena (Università degli Studi di Torino), Michele Roccato (Università degli Studi di Torino), Silvia Russo (Università degli Studi di Torino)*

Using the 3rd wave of the ResPOnsE COVID-19 dataset (data collected from March 17th to June 16th, 2021, with a Rolling Cross Section design that creates independent samples for each day, total N = 8210; detailed description of the study can be found in Vezzoni et al., 2020), we studied some COVID-19 pandemic's consequences on Italian public opinion, mainly people's attitude towards democracy and technocracy. We tested a multilevel model in which different types of contact with COVID-19 predicted the risk perception of falling ill with COVID-19, which in turn predicted, in association with trust in science and in institutions, attitudes towards democracy and technocracy. Taking advantage of the Rolling Cross Section design of the dataset, we used daily number of deaths and infection rate as Level-2 moderators of such relations. The discussion will cover the study of pandemic effects on trust in institutions and science for modern democracy, and the importance of different visions of science to govern and deal with the future challenges of democracy.

## SOCIAL PSYCHOLOGY OF FOOD

*Proponenti: Valentina Carfora (Università Cattolica del Sacro Cuore), Luigina Canova (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

Co-proponents: Valentina Carfora, Luigina Canova The general public mostly has a relatively poor understanding of what constitutes a healthy and sustainable diet. Then, convincing people to adopt it still faces many barriers. In the domain of the social psychology of foods, many researchers and practitioners are paying attention to how to predict and promote healthy and sustainable food choices. Within this context, the present symposium will welcome new insights into how today's they are challenging conventional theories, methodologies and applications for explaining and encouraging healthy and sustainable eating behaviour. Particularly, the present symposium will propose different contributions that tackle issues such as the psycho-social antecedents of food waste, the comparison between omnivores' and vegetarians/vegans' attitudes toward each other, the effectiveness of increasing autonomous or controlled motivation to increase the adherence to the Mediterranean diet, the impact of message framing to increase local food purchase and the integration of artificial intelligence to promote healthy eating based on individual predispositions. The discussion will aim at enhancing knowledge and methodology to accelerate advances in the field of social psychology of food.

## THE INFLUENCE OF MESSAGE FRAMING ON CONSUMERS' SELECTION OF ZERO-KILOMETER FOODS

*Valentina Carfora (Università Cattolica del Sacro Cuore), Maria Morandi (Università Cattolica del Sacro Cuore)*

Although local food purchasing provides several benefits to both consumers and producers, research on what messages can effectively promote the purchase of local food is still lacking. In the present study, 410 participants were involved in an intervention relying on messages promoting the purchase of zero-kilometre food. All messages were sent for 2-week through the PsyMe app and were focused on the environmental consequences of purchasing (or not purchasing) zero-kilometre food. Four experimental conditions involving messages differing as to outcome sensitivity framing (i.e., gain, non-loss, non-gain, loss) were compared to a control condition. To test the effectiveness of the messages, participants were involved in a choice task asking to choose among fruits with different provenience (i.e. from the participants' municipality of residence or abroad). Results showed that all message frames increased the selection of zero-kilometre food, compared to control. Furthermore, pro-environmental consumers were more persuaded by messages formulated in terms of gains and non-gains, whereas healthy consumers were more persuaded by messages formulated in terms of losses or non-losses. Discussion focuses on the advantages of tailored communication to promote the purchase of local food.

## SELF-REGULATION IN ADOPTING THE MEDITERRANEAN DIET: AN EXPERIMENTAL STUDY

*Daniela Caso (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Luigina Canova (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Miriam Capasso (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Marcella Bianchi (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Despite its advantages, the Mediterranean diet (MD) is still under-diffused, making it necessary to understand the psychological variables underlying its adoption. Using an integrated model of Theory of Planned Behavior (TPB) and Self-Determination Theory (SDT), the present study evaluated the efficacy of experimentally manipulating motivation (autonomous vs controlled) to change intention and MD adherence. The study consisted of two phases, with a time lag of two weeks. At T1, 726 Italian adults were randomly allocated to one of three conditions: autonomous motivation, controlled motivation and control group. In the experimental conditions, participants answered a verbal stimulus aimed at increasing their autonomous or controlled motivation to adhere to MD. TPB and SDT variables were measured at T1, except for the behavior, which was measured at T2, along with a second measurement of motivation. Participants in the autonomous motivation condition reported higher intention, attitude and autonomous motivation (both at T1 and T2) than those in the control group. Nevertheless, no change in behavior was found. Our study showed the effectiveness of targeting motivation to promote intention to adhere to MD, also suggesting the importance of further exploring the intention-behavior gap.

## FRAMING AND TAILORING MESSAGES TO PROMOTE HEALTHY EATING: PREDICTING EFFECTS THROUGH A PSYCHOLOGY-BASED GRAPHICAL CAUSAL MODEL

*Patrizia Catellani (Università Cattolica del Sacro Cuore), Valentina Carfora (Università Cattolica del Sacro Cuore), Marco Piastra (Università di Pavia)*

Effective recommendations on healthy food choice need to be personalized and sent out on a large scale. Through the collaboration between social psychologists and artificial intelligence experts, we present a model of automatic message selection tailored on the characteristics of the recipient. Starting from selected psychosocial models on food choices and the framing effects of recommendation messages, we involved an Italian sample in (a) filling out a first questionnaire (b) reading messages differing as to the framing of the hypothetical consequences of eating healthy (gain, non-loss, non-gain, loss), (c) filling out a second questionnaire. Data collected were employed to learn both the structure and the parameters of a Graphical Causal Model (GCM) based on a Dynamic Bayesian Network (DBN), aimed to predicting the potential effects of message delivery on eating related intention. Such probabilistic predictor is intended as the basis for developing automated interactions strategies using Deep Reinforcement Learning (DRL) techniques. Discussion focuses on how to develop automatic interaction strategies able to foster healthy eating.

## VEG\*NS' AND OMNIVORES' RECIPROCAL ATTITUDES: THE ROLE OF SOCIAL DOMINANCE ORIENTATION, INGROUP IDENTIFICATION, AND ANTICIPATED REPROACH

*Margherita Guidetti (Università degli Studi di Modena e Reggio Emilia), Anna Rita Graziani (Università degli Studi di Modena e Reggio Emilia), Nicoletta Cavazza (Università degli Studi di Modena e Reggio Emilia)*

Previous research has investigated the existence of and reasons for the commonplace prejudice omnivores hold against vegetarians and vegans ("veg\*ns"), with only a couple of recent studies also examining the other way round. Two studies, ran in different contexts, aimed to assess and compare omnivores' and veg\*ns' attitudes toward each other and to identify the social psychological factor explaining them. Study 1 (N = 216, Italian) showed that veg\*ns' attitudes toward omnivores were more negative than the reverse and that this difference was fully explained by veg\*ns' stronger identification with the ingroup and higher perceptions of reproach from the outgroup, even if omnivores' higher levels of social dominance orientation (SDO) worsened their attitude toward the outgroup. Study 2 (N = 200, mostly from UK) aimed to confirm these findings in a different context, also measuring implicit attitudes. Results replicated Study 1 findings at an explicit level. Interestingly, veg\*ns' and omnivores' implicit attitudes toward each other were equally positive and were not predicted by the same mediators associated with explicit attitudes, i.e., ingroup identification, anticipated reproach and SDO. The implications of the results for both theory and practice are discussed.



## MORAL EMOTIONS AND “GOOD PROVIDER” MENTALITY IN REDUCING FOOD WASTE: AN EXTENDED THEORY OF PLANNED BEHAVIOR

*Francesco La Barbera (Dipartimento di Scienze Politiche, Università degli Studi di Napoli Federico II), Roberta Rivero (Dipartimento di Scienze Politiche, Università degli Studi di Napoli Federico II), Mario Amato (Dipartimento di Scienze Politiche, Università degli Studi di Napoli Federico II), Fabio Verneau (Dipartimento di Scienze Politiche, Università degli Studi di Napoli Federico II)*

In recent years, scholars have multiplied their efforts to understand the psychological factors which affect consumers' food waste. Many studies explored the antecedents of food waste in the framework of theory of planned behavior (TPB), steadily showing the importance of the three TPB's major factors—attitude (ATT), subjective norms (SN), and perceived behavioral control (PBC). Scholars also made efforts to add explaining variables to the original TPB, with mixed results. A lack of research has been devoted to the role of emotions in forming individuals' intention to reduce food waste. In the current study, we analyzed a category of emotions potentially relevant in relation to food waste, namely moral emotions. In addition, drawing on previous research, we also evaluated the role of the “good provider” norm. We focused on two behaviors which may be predicted by intentions to reduce food waste: (1) reducing servings and (2) using leftovers. Results show that, compared to the traditional TPB model, the extended version including emotions and “good provider” norms has more predictive power. Moral emotions help explain leftovers utilization, whereas the good provider mentality is inversely correlated to the reduction of servings.

## BEWARE THE WOLF. THE CRITICAL ROLE OF THE CONTEXT IN INFLUENCING (SELF-) OBJECTIFICATION

*Proponente: Gian Antonio Di Bernardo (Università degli Studi di Modena e Reggio Emilia)*

The aim of the symposium is to present new evidence on how objectification (i.e., the reduction of a person to their sexual body parts or to an instrument) may be shaped by different social contexts, namely, romantic relationships, social interactions, and organizations. Regarding romantic relationships, Crapolicchio, Valtorta, and Cocchella, will discuss how partner-objectification justifies intimate partner violence against women; Di Bernardo, Ruzzante, and Pecini, will present evidence of the effects of partner-objectification on women's perceptions of personal power and relationship well-being. Regarding social interactions, Ruzzante and Vaes, employing implicit techniques, will show the consequences of objectification of women on mimicry; Pecini, Riemer, Saez, and Andrighetto, will provide empirical testing of the SIMO model showing the importance of sexual goals (mis)fit in shaping women's self-objectifying perceptions and attitudes toward the interaction. Finally, concerning the organizational contexts, Teresi and Ballone will discuss how workplace climate and organizational identification are associated with the perception of being treated as an instrument.

## WHY DO WOMEN JUSTIFY INTIMATE PARTNER VIOLENCE? THE ROLE OF MEN'S ATTITUDES AND WOMEN'S SELF- OBJECTIFICATION IN ROMANTIC RELATIONSHIPS

*Eleonora Crapolichio (Università Cattolica del Sacro Cuore), Roberta Rosa Valtorta (Università degli Studi di Milano-Bicocca), Francesca Cocchella (Università di Genova)*

Sexual objectification, i.e., the reduction of women to their sexual body parts, can be elicited in romantic relationships leading to adverse outcomes for the victim, including self-objectification. Research revealed that sexual and self-objectification affect individuals' acceptance of gender violence. However, no research tested the relationship between sexual and self-objectification and gender violence in the context of romantic relationships. Through two studies, the present research explored the underlying mechanisms linking partner-objectification (i.e., men's sexual objectification of their romantic partner) to women's acceptance of intimate partner violence. Study 1 (N = 171 heterosexual couples) demonstrated that partner-objectification was associated with increased violence acceptance in men, which, in turn, was related to enhanced women's acceptance of intimate partner violence. Study 2 (N = 235 heterosexual couples) also considered women's self-objectification. Results of this study revealed that both men's attitudes and women's self-objectification explained the link between partner-objectification and women's acceptance of intimate partner violence, confirming and integrating our prior results. Practical implications of these findings will be discussed.

## BEYOND BODY CONCERNS. HOW BEING REDUCED TO SEXUAL OBJECTS AFFECT WOMEN'S PERCEPTION OF PERSONAL POWER IN THE RELATIONSHIP

*Gian Antonio Di Bernardo (Università degli Studi di Modena e Reggio Emilia), Daniela Ruzzante (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Chiara Pecini (Università di Genova)*

Recent research found that (self-)objectification may emerge within romantic heterosexual relationships leading to adverse outcomes for women's well-being. Since the latter processes are based on unbalanced status relations, it is possible that personal power (i.e., the capacity to influence others) may be affected by women's body image concerns. Results of Study 1 (N = 187 women) displayed that the perception of being objectified by the partner was associated with hindered relationship satisfaction via the indirect effect of decreased power perceptions. In Study 2, 335 women were randomly assigned to one of the three experimental conditions; in the objectification condition, participants were asked to recall an episode when the partner treated them as sexual objects; in the personality condition, the episode was about being treated by the partner according to their personal characteristics; in the neutral control condition, it was asked to report an episode when the participant went to the grocery store with the partner. From findings emerged that in the objectification condition, women reported less personal power and more negative attitudes toward the recalled interaction compared to the other two conditions. Implications for romantic relations will be addressed.

## THAT'S NOT WHAT I WANTED! SEXUAL GOALS FIT/MISFIT IN INTERPERSONAL INTERACTIONS DETERMINE WOMEN'S EVALUATION AND BEHAVIORS IN THE RELATIONSHIP

*Chiara Pecini (Università di Genova), Abigail Riemer (Carroll University, USA), Gemma Sáez (University of Granada, Spain), Alessandra Sacino (Università di Genova), Luca Andrighetto (Università di Genova)*

According to the Social Interaction Model of Objectification (SIMO; Gervais et al., 2020), individuals' sexual goals fit or misfit determine how the objectifying interaction is evaluated, continued, or terminated. However, empirical studies testing SIMO's claims have been scarce. Through an experimental design, we asked participants (N = 270 women) to imagine an interaction with a man where sexual goals fit or misfit were manipulated. In the fit condition, both the man and the woman held sexual goals; in the first misfit condition (objectification), the man but not the woman did; in the second misfit condition (rejection), the woman but not the man did. Results revealed participants in the fit condition, compared to the participants in the objectification misfit condition, showed more positive emotions and attitudes toward the interaction, along with higher self-objectification and benefits over the costs of the interaction. In the rejection condition, participants reported more positive emotions, self-objectification, cost-benefit evaluations, and more positive attitudes toward the interaction compared to the other two conditions. These findings revealed the central role of sexual goal activation in the study of objectification.

## SOCIAL INTERACTION WITH SEXUALLY OBJECTIFIED WOMEN: REDUCED FACIAL MIMICRY RESPONSES TOWARD OBJECTIFIED COMPARED TO NON-OBJECTIFIED WOMEN

*Daniela Ruzzante (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Jeroen Vaes (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

Sexual objectification occurs whenever a woman is primarily seen as a body for others to evaluate and implies the denial of humanity. While research has mainly focused on harassment and aggression as the main behavioral consequences of sexual objectification, few studies have focused on more subtle consequences that might impair social interaction more in general. In this regard, spontaneous mimicry represents a key element of any social relationship that stimulates closeness to others. Vice-versa, a lack of mimicry can inhibit smooth interactions and decrease the liking of the interaction partner, leading to avoidance of such interactions in the future. With this study, we demonstrated how sexual objectification impairs unconscious spontaneous mimicry. Using electromyography, in two studies ( $N = 157$ ), we measured participants' mimicry behavior towards objectified and non-objectified women who expressed happiness and anger. Results indicated that both male and female participants showed less mimicry behavior only when sexually objectified women were presented regardless of the expressed emotion. Given the vital role of mimicry for successful interpersonal interactions, the current findings advance our understanding of the subtle but daily consequences of sexual objectification.

## EXAMINING WORKERS' SELF-OBJECTIFICATION THROUGH THE LENS OF SOCIAL IDENTITY: THE ROLE OF ETHICAL CLIMATE AND ORGANIZATIONAL IDENTIFICATION

*Manuel Teresi (Università degli Studi G. d'Annunzio di Chieti-Pescara), Chiara Ballone (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Organizational identification plays a pivotal role in understanding individuals' experiences in the workplace. Recent studies have shown how the perceived ethical climate, i.e., a set of shared perceptions that promote what is right or wrong to manage ethical issues, is a significant predictor of organizational identification and workers' attitudes and behavioral intentions. The present research introduces the construct of self-objectification, that is, the self-definition as less human and more instrument-like, and its impact on individuals' perceptions. The aim of the study is to test relationships between two specific ethical climates (friendship vs. self-interest) and self-objectification, considering organizational identification as a mediator of these relationships. The results of the study (N = 239) showed that a collectivistic climate (as opposed to an individualistic one) favors the increase of organizational identification levels and, in turn, reduces the perceived self-objectification during individuals' work experience. Results confirm the central role of organizational identification as a regulatory tool for the workers' quality of life, according to the ethical climate promoted in various company contexts.

## CONSEQUENCES OF GENDER STEREOTYPES: PSYCHOSOCIAL ANALYSIS

*Proponente: Norma De Piccoli (Dipartimento di Psicologia, Università degli Studi di Torino)*

The Symposium is the expression of some research interests on gender issues represented within the AIP Group on Gender Diversity and Inequality (GdG). The contributions present some consequences produced by gender stereotypes, as well as protective factors. In brief: gender stereotypes influence the behaviour of experts in the financial sector who, in turn, affect men's and women's financial knowledge and decisions differently (Giannella et coll.); objectification and self-objectification condition the couple satisfaction of both partners (Rollero and De Piccoli); workplace violence and ostracism affect workers' well-being and some personal and social resources are protective factors to cope with discrimination phenomena (Camussi et coll.). Attention is also paid to awareness of gender inequalities, which promotes both women's self-worth, even in the workplace (Ciaffoni et coll.), and men's support in contrasting gender equity (Moscatelli et coll.). The set of contributions offers suggestions for possible interventions, underlining that both women and men are agents for change towards gender equity and well-being



## WOMEN AND MONEY: HOW GENDER STEREOTYPES HINDER THE FINANCIAL CHOICES OF WOMEN

*Valeria Amata Giannella (Università Cattolica del Sacro Cuore), Claudia Manzi (Università Cattolica del Sacro Cuore), Eleonora Reverberi (Università Cattolica del Sacro Cuore)*

The literature shows that there is a clear difference between women and men in the approaches they have with money: men have a relationship with money that is more linked to success and power, while women use it to achieve family goals. The objective of these studies is to verify whether the relationship that women have with money is influenced by gender prescriptions and whether these also influence the behaviours that industry experts decide to adopt when they interact with female clients. The first correlational study (N = 2.078) showed that women's experiences in investment forms and the perceptions they have of their knowledge in the financial field are lower than those of men. The results on stereotypical perceptions found that the relationship between women and money is more associated with the warmth dimension, while the relationship between men and money is more associated with the self-enhancement dimension. A second study on a sample of financial consultants (N = 256) showed that gender stereotypes significantly determine the choices that consultants make about the type of products to present to female clients. Furthermore, male consultants seem to provide much more technical information to male clients.

## RELATIONSHIP SATISFACTION WITHIN ROMANTIC HETEROSEXUAL COUPLES: THE ROLE OF OBJECTIFICATION FROM A GENDER PERSPECTIVE

*Chiara Rollero (Dipartimento di Psicologia, Università degli Studi di Torino), Norma De Piccoli (Dipartimento di Psicologia, Università degli Studi di Torino)*

In Western cultures, objectification and self-objectification are still pervasive processes, for both men and women and across different contexts. Individuals are constantly exposed to messages promoting objectification and self-objectification, especially through cultural products, such as mass media programs and advertising. Several studies have demonstrated the negative psychological consequences of self-objectification experiences on mental health, wellbeing, and the endorsement of sexist attitudes. However, the context of romantic relationships is still scarcely explored. The present study aims at investigating: 1) whether mass media influence is related not only to self-objectification, but also to objectification of the partner; and 2) whether self-objectification, objectification of the partner and objectification from the partner are related to relationship satisfaction. Participants are 219 heterosexual couples (N=438). Data will be analysed via structural equation modelling, taking into account the potential moderation of gender. Results will be discussed from a gender perspective and in reference to interpersonal and sociocultural dimensions.

## LIFE DESIGN, DISCRIMINATION, AND WORKING WELL-BEING: QUANTITATIVE RESEARCH ON GENDER-BASED VIOLENCE IN ORGANIZATIONS

*Elisabetta Camussi (Università degli Studi di Milano-Bicocca), Chiara Annovazzi (Università della Valle d'Aosta - Università degli Studi di Milano-Bicocca), Marialuisa Sbarra (Università degli Studi di Milano-Bicocca), Daria Meneghetti (Università degli Studi di Milano-Bicocca), Carlo Bisio (CESVOR)*

Although the work environment has been characterized by multiple changes over the past 30 years, inequalities and injustices persist in these contexts, contributing to a significant increase in psychosocial risks and incidents of violence, including gender-based violence. For these reasons, the ratification of Convention 190-ILO was necessary. This ratification declares that violence and harassment in the workplace are recognized as a violation of human rights, a threat to decent work, and the development of equal opportunities. Starting from this, from a Life Design perspective, we are conducting quantitative research with male and female workers to intercept and prevent discrimination phenomena, particularly gender discrimination, in the workplace. Specifically, we plan to investigate the role and connection of personal resources - Resilience, Courage, Career Adaptability - and social resources - the relationships between colleagues - in facing the events of violence and ostracism in these contexts in terms of prevention and intervention. The research results and possible strategies and actions to contrast discrimination and gender-based violence in organizations will be illustrated in a design perspective to increase the work and life well-being of all.

## “NOBODY CAN HOLD US DOWN!”: AWARENESS OF GENDER DISCRIMINATION MOTIVATES FEMALE COLLEGE STUDENTS TO HIGHER PROFESSIONAL ASPIRATIONS

*Stefano Ciaffoni (Università di Bologna), Monica Rubini (Università di Bologna), Silvia Moscatelli (Università di Bologna)*

In the last decades in Western societies inequalities between men and women have almost disappeared when considering educational attainment and health. Yet, gender inequalities are still dramatic in other domains, such as economic participation, access to resources, or even in intimate relationships. How do women appraise these inequalities? And what type of effects has the awareness of being discriminated on college students' future aspirations? In a first series of cross-sectional studies (Ntot=1489) we created and validated a multifactorial instrument gauging different facets of awareness of gender inequalities. Findings explain that women's appraisal of gender inequalities develops across four related but different main themes: inequalities in the workplace, domestic unbalance, harassment towards women and tighter social norms regulating women's behaviours. In a second correlational study among female college students (N=418), we analysed the effects of awareness on women's career aspirations, considering the key-role of the contingencies of self-worth. Results of the path analysis showed that more awareness led women to nurture higher professional aspirations through higher value posed on the contingencies of self-worth of academic engagement and competition.

## MALE ALLIES FOR GENDER EQUALITY: FROM RELATIVE DEPRIVATION ON BEHALF OF WOMEN TO COLLECTIVE ACTION

*Silvia Moscatelli (Dipartimento di Psicologia, Università di Bologna), Silvia Mazzuca (Dipartimento di Psicologia, Università di Bologna), Michela Menegatti (Dipartimento di Psicologia, Università di Bologna)*

Research has shown that men often fail to recognize the occurrence and the severity of individual and institutional sexism toward women. However, men's alliance with women in the struggle toward gender equality is crucial to enacting social change. The present study (N = 427, Italian men) examined whether increased feelings of relative deprivation on behalf of women (a form of relative deprivation stemming from the perception of women's unjust working and economic disadvantage) were associated with men's greater intentions to engage in collective action for gender equality. It also analysed whether such association was mediated by men's stronger feelings of guilt related to their privilege, reduced fear of a potential backlash due to showing solidarity to women, and strengthened moral conviction related to acting for gender equality. The findings revealed that men's awareness of women's unfair disadvantage represents a key antecedent of their support for gender equality and highlighted the sequential mediating role of emotions and moral conviction. Therefore, interventions aimed to reduce gender inequalities should enhance men's recognition of women's disadvantages in society while minimizing the fear of backlash associated with actions that benefit women.

## ETHNIC AND CULTURAL DIVERSITY: INCLUSION AND INTERGROUP RELATIONS IN MULTICULTURAL CONTEXTS

*Proponenti: Maria Pagano (Dipartimento di Psicologia, Università di Bologna), Fabio Maratia (Dipartimento di Psicologia, Università di Bologna)*

Nowadays societies are characterised by increasing ethnic and cultural diversity. The current symposium aims to examine the individual (e.g., values, attitudes) and socio-contextual (e.g., family, schools, workplace, cultural) factors that support positive intergroup experiences and diversity inclusion. First, Zagrean and colleagues will tackle individual kindness as a protective factor against prejudice. Maratia will examine how inclusion norms are transmitted in families with adolescents. Pagano will investigate transmission of the quality of intergroup contact across different contexts. Boin and Matera will examine the role of immigrants' religion and acculturation strategies on majority members' attitudes towards minorities in the workplace. Finally, Bobba and Crocetti will examine how adolescents' prejudice against Ukrainians changes during the war and the factors shaping it. Taken together, these contributions suggest the importance of looking at both the contextual and individual factors that can promote harmonious intergroup relations among different ethnic groups.

## MORE KINDNESS, LESS PREJUDICE AGAINST IMMIGRANTS? SOMETIMES, BUT NOT ALWAYS. A PRELIMINARY STUDY WITH ITALIAN ADOLESCENTS

*Ioana Zagrean (Dipartimento di Scienze Umane, Lumsa Università di Roma), Lucrezia Cavagnis (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Sabrina De Angelis (Dipartimento di Scienze Umane, Lumsa Università di Roma), Claudia Russo (Dipartimento di Scienze Umane, Lumsa Università di Roma), Francesca Vittoria Danioni (Università Cattolica del Sacro Cuore), Maria Cinque (Dipartimento di Scienze Umane, Lumsa Università di Roma), Daniela Barni (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Prejudice against immigrants is a relevant research topic within social psychology. Researchers detected several individual variables affecting prejudice such as morality, personality, and sex. However, until now, it has never been studied in relation to kindness, which might be a significant protective factor against prejudice. Based on Kohlberg's theory of moral judgement, Comunian (1998) identified four stage dimensions of kindness, from egocentric to societal kindness (i.e., a means of social progress and improvement). This study aims to explore the relation between such kindness dimensions and blatant and subtle prejudice against immigrants in adolescence, also by considering the moderating effect of adolescents' sex. It involved 215 Italian participants (77% girls; Mage=16.77, SD=0.72), who were asked to fill in a self-report questionnaire. Moderated regression analysis showed that kindness was associated with both blatant and subtle prejudice, negatively or positively depending on the kindness dimension. Interestingly, both egocentric and extrinsically motivated kindness supported prejudice. Moreover, the positive association between egocentric kindness and blatant prejudice was moderated by sex, being stronger for boys. The implications of these findings are discussed.

## A FAMILY MATTER: ASSOCIATION BETWEEN MOTHERS, FATHERS AND ADOLESCENT LEVEL OF ACCEPTANCE ON INCLUSION NORMS

*Fabio Maratia (Dipartimento di Psicologia, Università di Bologna)*

Family is one of the main socialization contexts for adolescents, with parents playing a key role in influencing adolescents' attitudes, values, beliefs, and behaviours (Degner & Dalege, 2013). This study aimed to evaluate the relationship between parents' and adolescents' inclusion norms (i.e., to what extent they endorse policies aimed at promoting the integration of migrants). For this purpose, a questionnaire based on the Migrant Integration Policy Index (MIPEX) was administered to a sample of 1154 Italian adolescents involved in the IDENTITIES longitudinal project (Mage=15.74, SDage = 1.20, 51.6% female) and to their parents (NMothers= 662, NFathers= 492). Preliminary results, based on the first wave (January 2022) of the longitudinal project, showed that both mothers' and fathers' levels of acceptance of inclusion norms are positively associated with adolescents' norms. Notably, mothers and fathers exerted similar influences on adolescents' levels of acceptance of inclusion norms. Further longitudinal analyses will be conducted when the second wave of the study will be completed (May 2022) to further examine how these influence processes unfold over time.



## DO PARENTS INFLUENCE ADOLESCENT CHILDREN'S INTERGROUP RELATIONSHIP? A LONGITUDINAL STUDY ABOUT TRANSMISSION OF INTERGENERATIONAL CONTACT

*Maria Pagano (Dipartimento di Psicologia, Università di Bologna)*

In today's multicultural society adolescents can have a variety of intergroup experiences. An important role in this is played by the family. In fact, the quality of adolescent's intergroup experiences in different contexts can also be influenced by the experiences had by their parents (Bagci & Gungor, 2019). Thus, the main goal of this study is to understand how parents' contact experiences influence adolescents' experiences, differentiating between those that occur in structured contexts (i.e., work and school) and those that occur in unstructured contexts (i.e., in the leisure time). Participants are 1154 adolescents (51.6% females, Mage=15.74) and their parents (NMothers= 662, NFathers= 492) involved in the longitudinal study IDENTITIES. They completed a questionnaire with measures of quality of intergroup contact at two time points (T1 January/February, T2 April/May). Preliminary results at T1 highlighted that parents' positive contact experiences at work reduced adolescents' negative contact in the school environment. Further longitudinal analyses will be conducted at the end of the second wave and will be presented to understand intergenerational transmission processes.

## RELIGIOUS DIVERSITY IN THE WORKPLACE: THE EFFECT OF ACCULTURATION STRATEGIES ON MAJORITY ATTITUDES TOWARDS PEOPLE WITH DIFFERENT RELIGIOUS BACKGROUNDS

*Jessica Boin (Università degli Studi di Padova), Camilla Matera (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze)*

A 2x2x2 experimental study was conducted to examine the role of immigrants' religion and acculturation strategies on majority members' attitudes towards them in the workplace. 700 Italian workers read a fictional but seemingly real journal article reporting an interview with two immigrants, in which their religion (Muslim vs Sikh) and acculturation preferences (desire for contact and culture maintenance) were manipulated. The dependent variables were outgroup attitudes, multiculturalism, symbolic and realistic threat. Some ANOVAs revealed a main effect of contact: majority members showed more positive attitudes, higher multiculturalism, and lower perceived threat when immigrants were seen as desiring intergroup contact. Symbolic threat was higher when immigrants were perceived as more willing to maintain their culture. A main effect of religion emerged for multiculturalism and realistic threat: majority members endorsed multiculturalism more and perceived less realistic threat for Sikhs than Muslims. A religion x contact x cultural maintenance interaction effect emerged on attitudes: attitudes were more positive when Muslims preferred assimilation and Sikhs chose integration as acculturation strategies. Results were robust also controlling for direct contact with the outgroups.

## IN THE MIDST OF 2022: SOCIO-CONTEXTUAL FACTORS SHAPING ADOLESCENTS' ETHNIC PREJUDICE IN CURRENT TIMES

*Beatrice Bobba (Dipartimento di Psicologia, Università di Bologna), Elisabetta Crocetti (Dipartimento di Psicologia, Università di Bologna)*

Adolescence is a core period for the development and consolidation of values, attitudes, and behaviors that are usually maintained in the following years and inform youth's future approach to society and others (Meeus, 2019). These processes unfold within dynamic interactions between individuals and multiple social agents that are shaped by broader influences and informed by the zeitgeist of current times (Crocetti et al., 2021). Recent events such as the Ukrainian war might shape social discourses on issues of migration and therefore influence adolescents' views and attitudes towards ethnic minorities. The current study aims to examine how adolescents' prejudice against Ukrainians and other ethnic minorities changes during the first half of 2022 and to identify the factors that might affect such development. Participants are 1154 adolescents (51.6% females, Mage=15.74) involved in the longitudinal study IDENTITIES, who complete measures of ethnic prejudice at two time points (T1 January/February, T2 April/May). A latent change score model will be tested in Mplus to examine change in ethnic prejudice and the factors (e.g., parents' prejudice, media representation of Ukrainians) shaping it. Results will be discussed in light of their theoretical implications.

## **BODY IMAGE AND SOCIO-CULTURAL DIMENSIONS: THE ROLE OF SOCIAL MEDIA AND SOCIAL INFLUENCE PROCESSES**

*Proponenti: Francesca Guizzo (University of Surrey, UK), Chiara Rollero (Università degli Studi di Torino)*

Societal and media supported norms have a great impact on body image concerns especially of women (Grogan, 2021). The symposium will present research that provides new evidence on the negative impact of social media and sociocultural dimensions as well as on potential intervention strategies. It is opened by Nerini et al. that investigated if body appreciation mediates the link between compassionate skills and health-related outcomes. Next, Bianchi et al. will present data on the relation between Instagram-photo activities, drive for thinness, and body dissatisfaction also considering the role of social comparison and internalization of beauty standards. Guizzo et al. will present experimental results on the effects of exposure to sexualized Instagram posts on women's body dissatisfaction and the role of Instagram addiction proclivity to predict cosmetic surgery interests. Next, Di Gesto will present data on the negative impact of Instagram likes and potential buffering effects of disclaimers about pictures' digital enhancements on young women's body image concerns. Finally, Di Michele et al. will discuss the results of a research testing the efficacy of different types of body positivity messages in promoting women's body image outcomes.

## COMPASSION ABILITIES AND HEALTH-RELATED OUTCOMES: THE ROLE OF BODY APPRECIATION

*Amanda Nerini (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Camilla Matera (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Daniela Caso (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Anna Rosa Donizzetti (Università degli Studi di Napoli Federico II), Chiara Rollero (Università degli Studi di Torino)*

Empirical evidence has shown that self-compassion is associated with positive body image. The role of other two compassion abilities, namely compassion for others and compassion from others, is less explored. This study aimed to examine if body appreciation might mediate the link between the three compassionate skills and some health-related outcomes, such as healthy eating, sexual well-being and consideration of cosmetic surgery. Methods. Participants were 945 (197 men, 740 women, 8 other) who completed an online questionnaire assessing the research variables. Results. Path analysis showed that the three compassionate abilities predicted body appreciation, which in turn was related to emotional eating, sexual enjoyment and consideration of cosmetic surgery. As hypothesized, all the indirect effects were significant. The model presented a very good fit to the data (CFI=.98; RMSEA=.06). Conclusions. This study contributes to a better understanding of the three compassion skills in promoting body appreciation and several positive outcomes. From a preventive perspective, these findings might be useful for planning interventions aimed at promoting positive body image and healthy habits.

## THE RELATIONSHIP BETWEEN INSTAGRAM ACTIVITY AND BODY CONCERNS: THE MEDIATING ROLE OF INTRAGROUP MECHANISMS

*Mauro Bianchi (Università di Trieste), Valentina Piccoli (Università di Trieste), Andrea Carnaghi (Università di Trieste), Michele Grassi (Università di Trieste)*

According to recent research, exposure to images on social media may be linked to body image concerns (i.e., drive for thinness and body dissatisfaction). In two study, and within a sample of young women (Study 1, N = 115; Study 2, N = 120), we examined this relationship by considering the possible mediating role of both appearance-related comparisons (i.e., comparing oneself to others on a specific dimension) and the internalization of beauty standards (i.e., accepting the dominant physical-attractiveness societal standards). The results showed that through the mediating role of appearance-related comparisons on Instagram, Instagram photo activity was positively connected with both drive for thinness and body dissatisfaction. We also demonstrated that appearance-related comparisons on Instagram and internalization of beauty standards serial-mediated the relationship between Instagram photo activity and body image concerns. Female participants who used Instagram, expressed more concerns about their bodies, as they were more likely to make more comparisons in the appearance dimension and also showed high levels of internalization of beauty standards. Theoretical and practical aspects in the social media domain are analyzed with respect to these findings.

## EFFECTS OF INSTAGRAM SEXUALIZED POSTS ON YOUNG WOMEN'S BODY SATISFACTION AND COSMETIC SURGERY INTEREST

*Francesca Guizzo (University of Surrey, UK), Natale Canale (Università degli Studi di Padova), Fabio Fasoli (University of Surrey, UK)*

Along with an increase in popularity, Instagram has also seen an enhanced presence of sexualized imagery posted by users. The present study extended previous research by examining whether exposure to posts featuring sexualized women and appearance-related comments may affect female users' body satisfaction and cosmetic surgery intentions. The moderating role of Instagram Addiction Proclivity (IAP) was also considered. Young Italian female participants ( $N = 247$ ) were randomly exposed to one of four video conditions resulting from the combination of either sexualized or non-sexualized women's pictures on Instagram, paired with appearance or neutral comments. Participants exposed to sexualized pictures reported greater body dissatisfaction compared to pre-exposure levels and compared to participants in the non-sexualized picture condition. Participants' body satisfaction was not affected by the type of comment. Moreover, IAP predicted cosmetic surgery intentions and moderated participants' reactions to Instagram content: the higher the IAP, the higher the cosmetic surgery intentions of participants viewing sexualized pictures with neutral comments and non-sexualized pictures with body appearance comments. Theoretical and practical implications will be discussed.

## THE BODY KEEPS THE SOCIAL: THE ROLE OF INSTAGRAM ON BODY IMAGE AND ITS RELATED OUTCOMES AMONG YOUNG ITALIAN WOMEN

*Cristian Di Gesto (Università degli Studi di Firenze), Giulia Rosa Policardo (Dipartimento di Scienze della Salute, Università degli Studi di Firenze)*

Although correlational studies showed that Instagram use is associated with negative outcomes related to body image (Feerick, 2021), experiments are scarce. This study examined the effects of being appreciated on Instagram (numbers of Likes) and knowing whether or not the physical appearance of a person in an Instagram image has been altered (Disclaimer)—on women's self-awareness, body dissatisfaction, and social physique anxiety. It was used a 2x2 between participants design in which the number of Likes and the image Disclaimer were manipulated. Participants were 201 Italian women ( $M=22$ ;  $SD=3.69$ ), randomly assigned to different conditions. Findings showed that participants exposed to an Instagram image with many Likes reported higher body dissatisfaction and social physique anxiety (vs. few Likes condition). An interaction effect between the Disclaimer and the number of Likes emerged. When many Likes were associated with an Instagram image, the presence of a Disclaimer reduced women's self-awareness. These findings suggest that increased media literacy training could be advantageous for young women. Specifically, in the presence of socially accepted Instagram images, providing information about digital enhancements could reduce the attentional focus about one's own appearance.



## #BODY POSITIVE: WHEN SEXUALIZATION MAY HAVE A POSITIVE IMPACT ON YOUNG WOMEN'S BODY IMAGE

*Daniela Di Michele (Università degli Studi di Padova), Francesca Guizzo (University of Surrey, UK), Mara Cadinu (Università degli Studi di Padova)*

Previous research suggests that exposure to social media contents portraying the thin and sexualized beauty ideal reduces young women's body satisfaction, while exposure to body positivity contents could improve it. However, it is not clear whether sexualization of body positivity contents could impair the positive effects of their messages. Young Italian female participants (Study 1 N = 365; Study 2 N = 329) watched an Instagram (Study 1) or TikTok (Study 2) video of sexualized and thin women vs. sexualized (or non-sexualized) women promoting body positivity. Body satisfaction, social comparison, self-objectification, intentions towards cosmetic surgery, and social media addiction proclivity were measured. Overall results showed that, regardless of sexualization, exposure to body positivity contents increased body satisfaction compared to pre-exposure measures, while exposure to sexualized and idealized contents reduced it. Participants in the latter condition (vs body positivity conditions) engaged in upward social comparison. Furthermore, social media addiction proclivity predicted participants' body satisfaction, self-objectification, and intention to undergo cosmetic surgery. Practical implications are discussed.

# EXPERIENCE OF INTERVENTIONS AND METHODOLOGIES IN COMMUNITY PSYCHOLOGY

*Proponente: Immacolata Di Napoli (Università degli Studi di Napoli)*

Community psychology contributes to the broader psychological field by deepening, in an ecological approach, the complex interaction between individual and context. By adopting the individual's vision as an active subject, community psychology proposes a participatory methodology in which the involvement of individuals is essential. Therefore, individuals are not only recipients of actions and interventions but become protagonists of co-creation processes and activation of participatory processes for social changes. The symposium collects four presentations describing: the application of the research of participatory action in the territorial community for the promotion of the quality of life; voluntary action as a form of participatory processes in the community; the use of participatory meeting processes conducted with the consensus conference methodology for the development of services; and the photovoice as research methods of participatory action for the promotion of social change and in particular its long-term impacts. The symposium will discuss experiences of different implementation of participatory research projects focusing mainly on community psychology methodologies.

## NEW TIME FOR THE CITY: A PARTICIPATORY ACTION RESEARCH

*Immacolata Di Napoli (Università degli Studi di Napoli), Fortuna Procentese (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

The contribution focuses on an experience of a participatory action research, commissioned by the municipality of Afragola, located in the province of Naples, whose request was to plan a new time of the city, that is reorganizing and reconciling the timing of public, private and commercial services with the life times of citizens, so increasing their quality of life. A participatory action research was applied. Local stakeholders, citizen and local institution were involved during the whole process of participatory action research. Individual interviews and focus groups were carried out to collect the needs, expectations, desires and proposal for the improving of the time of the city and therefore personal, collective and community well-being. Several meetings involving local institutions and citizens were held to discuss all data collected during the research activities and activate decision-making processes as well as processes of co-creation for new solutions of social change. Methodological observations will be discussed and considered starting from the action research realized.

## PHOTOVOICE: THE IMPACT OF A PARTICIPATORY ACTION RESEARCH

*Marta Gaboardi (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Massimo Santinello (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Photovoice is a participatory action research method that integrates photography and critical discussion to examine topics from the perspective of the participants who are considered experts in the environments in which they live. Participants took photos that reflect important aspects of their contexts and then discuss the photos in groups to develop proposals for social change. Few studies have been conducted in working contexts and have documented the long-term impact of this method. The aim of this study was to evaluate the impact after a year of a photovoice project conducted in an Italian homeless service. The participants elaborated 4 proposals regarding: internal communications, relationship between social service providers and volunteers, constant updates on the clients' paths, training and psychosocial supervision for the team. Photovoice results were presented during a meeting with the organization's leaders and shown in an exhibition. The impact of the project was verified 1-year later with an interview to the participants. Three of the four proposals have been implemented. This research demonstrated the potential of using photovoice in work environments to both identify factors that influence a community setting and to empower participants in their own life context.

## UNDERSTANDING AND FACING PATHOLOGICAL GAMBLING DISORDER (GAP) BY PROMOTING HEALTH AND COMMUNITY DEVELOPMENT: AN INTERVENTION-RESEARCH

*Diletta Gazzaroli (Università Cattolica del Sacro Cuore), Elena Marta (Università Cattolica del Sacro Cuore), Carlo Pistoni (Università Cattolica del Sacro Cuore), Laura Ferrari (Agenzia di Tutela della Salute di Brescia), Maria Vizzardi (Agenzia di Tutela della Salute di Brescia)*

The research-intervention aimed to investigate community health in the City of Brescia, focusing on a specific “symptom”, that is GAP, meant as the outcome of individual, familiar and community fragility situations. The research-intervention had multiple goals: to read community’s health/malaise; to increase awareness of community’s resources and potential; to activate citizens, organizations and strengthen local networks. The work was based on a dialogic-participatory approach that saw the collaboration of the University with local services. Stakeholders and citizens were involved through focus-groups, interviews and questionnaires. The process was accompanied by video-narratives that functioned as a logbook of the activities to give visibility to the project and promote community reflection. From data analysis a fragmented and non-univocal representation of GAP emerged, showing how prevention and caretaking interventions are not oriented towards a network management with weak connections between the parties involved. In conclusion, managing GAP, to promote community health, means taking a systemic view of the phenomenon to enhance the resources and networks already present in the area, strengthen them and, together with them, raise awareness and activate all community actors

## IMPROVE THE NETWORK OF RECEPTION SERVICES FOR UNACCOMPANIED MIGRANT MINORS THROUGH CONSENSUS CONFERENCE METHODOLOGY

*Elisa Guidi (Università degli Studi di Firenze), Camillo Donati (Dipartimento della Formazione, Lingue, Intercultura, Letterature e Psicologia, Università degli Studi di Firenze), Cristina Cecchini (Università degli Studi di Firenze), Patrizia Meringolo (Dipartimento di Scienze della Formazione e Psicologia, Università degli Studi di Firenze), Valentina Ferrucci (Istituto degli Innocenti), Moira Chiodini (Università degli Studi di Firenze)*

The active involvement of key stakeholders belonging to the network of reception services for unaccompanied migrant minors (UMM) appears to be a crucial action to implement to develop strategies oriented toward services' improvement. This contribution fits into the "Up Minori" project and presents two processes of participatory meetings conducted with the methodology of consensus conference (Cecchini & Donati, 2020; Danish Board of Technology, 2010). The aim was to identify recommendations for the development of inclusive services for UMM in Tuscany. Participants were six staff members from the reception facilities involved in the project (first process) and four stakeholders from the entities belonging to the network of reception services for UMM (second process). Consensus conference allowed researchers to identify the degree of agreement between participants regarding measures to improve territorial services for UMM within specific areas of reference (taking charge, educational project, institutional network, territorial network, training needs, and monitoring). Recommendations emerged as a Charter of Intent, supporting collaborations in a long-term perspective, and highlighting a common reference framework for both the development and implementation of effective services.

## FACTORS ASSOCIATED WITH MOBILIZING AND SEDATIVE EFFECTS IN COLLECTIVE ACTION

*Proponente: Veronica Margherita Cocco (Università di Parma)*

The present symposium aims to explain the complex phenomenon of collective action moving from several approaches, in different contexts and providing new research directions. Vezzali et al., conducted a review to identify whether, when, and why intergroup contact has mobilizing or sedative effects. Cocco et al., considering the involvement of social identity processes in the struggle for social change, investigate the association between common identity and collective action highlighting the implication of morality in the Nigerian tribal context. Pagliaro et al., explore the association of moral violation with collective action and related underlying processes within a triangular context characterized by majority and minority groups and the authority. Pozzi et al., considering activists and non-activists, explore the role of social-psychological precursors of collective action in a real-life setting in Chile. De Cristofaro et al., moving toward a cultural psychology of collective action, deepen the understanding of the association between system justification and collective action by exploring the moderating role of the cultural-psychological variable of individualism-collectivism.

## INTERGROUP CONTACT AND COLLECTIVE ACTION: A REVIEW

*Loris Vezzali (Università degli Studi di Modena e Reggio Emilia), Veronica Margherita Cocco (Università di Parma), Sofia Stathi (University of Greenwich, UK), John F. Dovidio (Yale University, USA)*

Recent research revealed that while intergroup contact is generally associated with prejudice reduction, the emergence of a similar association between contact and collective action is less frequent. We therefore conducted a narrative review aimed to explore the relationship between intergroup contact and collective action among advantaged and disadvantaged groups. The main aim is to understand whether contact has mobilizing or sedative effects. Additional aims are to understand when and for whom these effects occur, and why. We consider different types of contact (direct or face-to-face, and indirect or not face-to face; positive and negative) and distinct forms of collective action (normative and non-normative). We located 134 studies, including both advantaged (95) and disadvantaged samples (56). We created categories for both moderators and mediators, differentiated in variables associated with the intergroup situation, the outgroup, the ingroup. Results showed that contact generally has mobilizing effects among advantaged groups, and mixed mobilizing and sedative effects among disadvantaged groups. For both moderators and mediators, intergroup relations factors qualify as the most prominent.



## THE ROLE OF COMMON INGROUP IDENTITY IN PROMOTING COLLECTIVE ACTION AMONG TRIBES IN NIGERIA

*Veronica Margherita Cocco (Università di Parma), Tobiloba Ikeola Kola-Daisi (), Huseyin Çakal (Keele University, UK), Gli Autori Citati In Questa Sezione Corrispondono Ai Coaturi Del Contributo Individuale Da Me Proposto*

The promotion of social equality among groups represents an urgent goal that must be achieved, particularly in contexts characterized by conflict. An extensive line of research has highlighted the key role that a common ingroup identity can have in promoting positive relations among groups. Despite the significant involvement of social identity processes in the struggle for social change, the association between common ingroup identity and collective action is still lacking. The present research aims to investigate the associations between common identity and collective action engagement among majority group members, testing moral convictions, outgroup attitudes and feelings as mediators. With the aim to avoid a binary logic of society we recruited a non-WEIRD sample in a tribal context in Nigeria, considering, as reference outgroups, two relevant tribes of different social statuses. Results showed a positive association between common Nigerian identity and collective action strategies toward both tribes via greater moral convictions. Outgroup feelings worked as mediator only toward the minority tribe. Results will be reasoned in terms of the relevance that a one-group identity can play in shaping intergroup perception promoting morality attributions and in turn social change.

## MORAL VIOLATION AND COLLECTIVE ACTION: A PRELIMINARY STUDY BASED ON THE POLITICAL SOLIDARITY MODEL OF SOCIAL CHANGE

*Stefano Pagliaro (Università degli Studi G. d'Annunzio di Chieti-Pescara), Manuel Teresi (Università degli Studi G. d'Annunzio di Chieti-Pescara)*

Previous research on collective actions has traditionally focused on disadvantaged groups striving to challenge the status quo to induce social change. According to the political solidarity model of social change, a better understanding of these dynamics involves considering a triangular pattern, within which majority members challenge the authority through political solidarity with the minority. This should be the case when the authority is perceived as illegitimate because it violates moral instances, calling for a mobilization against social injustice. This correlational study aims to provide preliminary evidence about this process, by considering the willingness of a sample of men (N= 397) to take part in collective actions on the behalf of women as a function of the perception of the authority moral violation of women's rights. Results showed that, when participants perceived that the authority violated women's rights, they were more inclined to participate in collective actions supporting women, but only when the authority was perceived as illegitimate. Moreover, this effect was mediated by group-based anger against injustice. Results are discussed in terms of the political solidarity model of social change and its conceptualization of factors triggering collective actions.

## ‘COMING TOGETHER TO AWAKEN OUR DEMOCRACY’: COLLECTIVE ACTION AMONG ACTIVISTS AND NON-ACTIVISTS IN THE 2019–2020 ‘CHILE DESPERTO’ PROTESTS

*Maura Pozzi (Università Cattolica del Sacro Cuore), Stefano Passini (Università di Bologna), Maria Chayinska (Pontificia Universidad Católica de Chile, Chile), Davide Morselli (Swiss Centre of Expertise in Life Course Research LIVES, University of Lausanne, Switzerland), Adriano Mauro Ellena (Università Cattolica del Sacro Cuore), Anna W - odarczyk (Universidad Católica del Norte), Carlo Pistoni (Università Cattolica del Sacro Cuore)*

Social movements can be a powerful instrument of social change especially when they bring together activists - a social group within a wider society committed to ideological causes of injustice - and non-activists - members of the public. The aim of the contribution is to understand the variability and similarity in the association between the social-psychological precursors of collective action among 549 activists and 234 non-activists in a real-life setting, the emergence of the 2019–20 ‘Chile despertò’ social movement. Results highlighted that social identification with the supporters of the movement and prosocial disobedience attitude have a prominent role in mobilizing collective action intention across both groups. Activists had a more problem-focused approach to social mobilization shaped primarily by their beliefs that the attainability of change depends primarily on one’s own actions while non-activists were more inclined to have an emotion-focused approach to coping with collective disadvantage. This study highlights that non-activists can be politically active too and that a remarkable support for a political social movement among the broader society is possible to the extent that people share a belief that democracy is in risk and has to safeguarded.

## THE RELATION BETWEEN SYSTEM JUSTIFICATION AND COLLECTIVE ACTION IN INDIVIDUALISTIC VERSUS COLLECTIVISTIC EUROPEAN COUNTRIES

*Valeria De Cristofaro (Sapienza Università di Roma), Martijn Van Zomeren (University of Groningen, Netherlands), Mauro Giacomantonio (Sapienza Università di Roma)*

This study addressed the need to move toward a cultural psychology of collective action by investigating whether the cultural-psychological variable of individualism-collectivism may moderate the negative relation between system justification and collective action. We considered a representative sample of the European population, using data from the European Social Survey (2018), and investigated whether the strength of the negative relation between system justification and collective action may differ across individualistic and collectivistic countries. Because collectivism (vs. individualism) emphasizes the relevance of one's group and its goals, but it also binds individuals to their broader system, we formulated the competing predictions that the negative relation between system justification and collective action may be weaker, or oppositely stronger, in collectivistic countries. Results showed a cross-level interaction of system justification with individualism-collectivism confirming the negative relation between system justification and collective action in individualistic, but not collectivistic, countries. These results suggest that collectivistic (vs. individualistic) cultures dampen the system justification-collective action negative relation.

# SUFFERING AND CHALLENGING INEQUALITY: CONSEQUENCES OF RELATIVE DEPRIVATION FOR PERSONAL WELLBEING AND POLITICAL MOBILIZATION

*Proponenti: Silvia Galdi (Università degli Studi della Campania 'Luigi Vanvitelli'), Caterina Suitner (Università degli Studi di Padova)*

Even if the detrimental consequences of inequality are well known, collective efforts to reduce it are still very limited, possibly because people might engage in different reactions, either freezing in passive acceptance or fighting against it. This symposium provides evidence for the pervasive influence of the perception of inequality, focusing on two outcomes: wellbeing and political engagement. Marinucci and coll show the mechanisms conveying the psychological impact of perceived wealth inequality comparatively in a sample of homeless and non-homeless people. Filippi and coll demonstrate that perception of salary inequality in the organizational context erodes workers' wellbeing. Mazzuca and Rubini provide evidence that women's feelings of deprivation are associated with willingness to engage in collective action for gender equality. Ambrosio and Galdi show that perceived wealth inequality increases the tendency of poor individuals to judge their vote as less useful and manifest reduced intention to vote as compared to those in a middle and high social class. In addition, Vezzoli and coll demonstrate that perceiving greater inequality increases individuals' tendency to take political action, but only if they belong to the higher class, whereas erodes poors' political action.

## ECONOMIC AND POLITICAL DISTANCE: ECONOMIC INEQUALITY REDUCES TURNOUT OF LOWER, BUT NOT HIGHER, INCOME GROUPS

*Chiara Ambrosio (Università degli Studi della Campania 'Luigi Vanvitelli'), Silvia Galdi (Università degli Studi della Campania 'Luigi Vanvitelli')*

How much does belonging to an economically unequal society influence turnout? Little is known about the connections between economic inequality and electoral participation. The available evidence is correlational and tilted toward a depressing effect of inequality on political engagement with a substantial number of null findings. This is worrisome for the fight against inequality and poverty, given that parties have an incentive to implement social protection and redistribution policies only if (disadvantaged) citizens turnout to vote. Adding to a growing body of work on the psychology of economic inequality and social class, for the first time, the present research examined experimentally the effects of economic inequality on individuals' beliefs about the usefulness of their vote for a change of government and actual intention to vote. Across two studies (Study 1: N = 911; Study 2: N = 2233) we found that participants allocated to a low income judged their vote less useful and manifested reduced intention to vote as compared to those in a middle and high social class condition. Importantly, perceived high economic inequality increased this tendency compared to the low economic inequality condition. Implications of these results will be discussed.

## THE IMPACT OF ELEVATED CEO-WORKER PAY GAP ON PERCEIVED ORGANISATIONAL WELFARE, SHARED IDENTITY, AND WORK-LIFE INTERFERENCE

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CEO-worker gap, broadly defined as the discrepancy between the wage of a CEO/top executive and the lowest-paid worker of the same company is a highly debated topic both in the organizational literature and in the media. Literature in the management field has traditionally focused on the effect of the CEO-worker pay gap on organizational productivity and performance, rather than on workers' well-being. In two studies we analysed the impact of CEO-worker pay gap on a range of organisational outcomes linked to well-being, such as perceived organisational climate and welfare, sense of organisational identity, and work-life interference. In Study 1, we explored this link among a sample of workers (N = 283) using a correlational design. In Study 2 (N = 133), we experimentally tested this relationship by creating an experimental paradigm that manipulated CEO-worker pay gap. Results consistently showed that elevated CEO-worker pay leads to a decreased sense of organisational identity and a worsened perception of organisational climate, while increases work-life interference. Implications of these findings and future directions are discussed.

## ON THE LOWEST RUNG OF THE LADDER: PERCEIVED ECONOMIC INEQUALITY AFFECTS HOMELESS PEOPLE'S PSYCHOLOGICAL WELL-BEING BY INCREASING GROUP IDENTIFICATION AND SOCIAL EXCLUSION

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The perception of economic inequality has negative repercussions on social cohesion and psychological well-being. Despite the research is increasingly addressing this social issue, empirical studies have neglected the investigation of economic inequality on those who are most affected by it: homeless people. The present quasi-experimental research investigated the mediating mechanisms conveying the psychological impact of perceived economic inequality comparatively in a sample of homeless and non-homeless people (N = 183). Results showed that subjective inequality had a negative influence on mental health indirectly by triggering the perception of social exclusion only in homeless people, not also in the non-homeless group. Additional analyses highlighted that the identification with the stigmatized homeless group could play a further role by serially mediating the relationship between perceived inequality and social exclusion that ultimately affected well-being. The findings highlighted the role of homeless group identification and social exclusion as group-specific mechanisms explaining the impact of perceived economic inequality on homeless people's psychological well-being.



## LET'S CHANGE OUR CONDITION: FROM WOMEN'S RELATIVE DEPRIVATION TO COLLECTIVE ACTION

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Gender equality is far from being reached, especially in the labour market. Given the wide social implications of this phenomenon a deeper understanding of the socio-psychological processes that can help to countermand gender inequalities is needed. Relative deprivation models offer an important point of reference on how disadvantaged people can get motivated to act collectively to improve their conditions. However, to date no empirical study has assessed whether women's awareness of gender inequality can motivate them to collective actions. To this end we recruited women and examined if their experience of deprivation can motivate them to collectively act for gender equality. Results of 2 studies ( $n_1=485$ ,  $n_2=320$ ) showed that women's feelings of deprivation were associated to high willingness to engage in collective action for gender equality and that the experience of resentment together with moral convictions about acting for gender equality sequentially mediated such association. These findings suggest that women's awareness and discontent of gender inequality is an important antecedent for their mobilization. In addition, emotions and moral motivations are two important psychological factors that can help to turn cognition into behaviours.

## INVESTIGATING THE IMPACTS OF COVID-19 ON THE RELATIONSHIP BETWEEN PERCEIVED ECONOMIC INEQUALITY AND POLITICAL ACTION

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Economic inequality qualifies as a structural characteristic leading to political action, albeit this relationship manifests differently across socioeconomic classes. COVID-19 pandemic has amplified existing economic inequalities in ways that increased social tensions and political unrest around the world. This research investigates the effect of COVID-19 personal impacts on the relationship between perceived economic inequality and individuals' political actions. An online survey was administered to a representative sample of 1446 Italians of which 51% were women with a mean age of 42.42 years ( $SD = 12.87$ ). The questionnaire assessed the perceived economic inequality, the personal impacts of COVID-19 (i.e., on finance, mental health, and ability to procure resources), and individuals' involvement in political actions. Moderation analyses were conducted separately for different socioeconomic classes. Results showed that individuals who perceive greater economic inequality are more likely to take action, but only if they belong to the higher class. For lower-class individuals, perceiving greater inequality erodes political action. Interaction effects occurred mainly in the middle class and with COVID-19 impacts on resources procurement, which inhibits political action.

# THE CHALLENGE OF CHANGE: THE CONTRIBUTION OF SOCIAL PSYCHOLOGY TO THE UNDERSTANDING OF A TRANSFORMING SOCIETY

*Proponenti: Lorenzo Montali (Università degli Studi di Milano-Bicocca), Fortuna Procentese (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Innovation and social transformation constitute the key features of our liquid contemporaneity and can result in a state of uncertainty due to the loss of traditional categories and landmarks in thinking about and in relating to the social world. These processes of change therefore imply the need for individuals and groups to re-signify their experiences, both by creating new relationships with the objects and by producing new personal and collective identities. Within this framework, social psychology research allows us to identify dynamics of adaptation and innovation, to observe how these processes of resignification are shaped through social interaction, and how they are influenced by the context in which they occur. The objective of the symposium is to present some studies that have investigated the psychosocial impact of social changes and transformations in different domains (daily life, work, natality, sexual identity) and in different institutional and relational contexts, as well as to reflect on the contribution that our discipline can provide in supporting and accompanying these changes.

## DIGITIZATION OF DECISION-MAKING PROCESSES DURING THE PANDEMIC: TECHNOLOGY ACCEPTANCE, EMPOWERMENT AND INTENTIONS TO USE DIGITAL TECHNOLOGY IN THE UNIVERSITY CONTEXT

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The COVID-19 pandemic has resulted in the massive use of digital technologies. At universities, as well, digitization has involved both teaching and decision-making activities of councils and commissions. This research is inspired by theoretical models on technology acceptance and psychological empowerment to identify factors that can support successful participation in group decision-making processes. The paper analyzes the use of digital tools by university staff, in particular MS Teams, for decision-making processes during the pandemic. The role of factors such as perceptions of benefits and limits, usefulness, and ease of use of digital tools, psychological empowerment and attitudes towards technology will be analyzed. The study via online questionnaire involved 657 participants between 26 and 69 years ( $M = 50.2$ ; 58% women). The analysis identifies as facilitating factors for the intention of future use: higher levels of perception of benefits from use, greater perceived usefulness, higher psychological empowerment and positive attitudes towards technology. The results offer an original contribution to the psychosocial investigation of a rapidly changing phenomenon such as that of the digitization of collaborative decision processes within higher education.

## DENATALITY AND GENDER EQUALITY: QUANTITATIVE RESEARCH ON EXTERNAL AND INTERNAL BARRIERS

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A massive and prolonged drop in the birth rate is a phenomenon that can lead to impair the proper “replacement” of a whole country’s population - such as in contemporary Italy, for example - with significant fall-outs both on social and economic grounds. Three main causes of this phenomenon are identified in literature: demographic causes, economic causes and socio-cultural causes. The latter include gender discrimination, gender pay-gap, stereotypical roles, and social expectations (especially aimed at women and their maternal “destiny”). To investigate the female perception of the desire for motherhood and the difficulties connected with it, a quantitative research was carried out. The results of the 800 questionnaires collected show first of all that there is a significant difference between the number of ‘desired children’ and those actually born or planned to have. Results show also how this difference, as well as the difficulty of investing in building a family, have their roots in women’s perception of inequities and social injustices, highlighting a connection between individual/couple choices and the related social context.

## COMING-OUT BETWEEN CHANGE AND PERSISTENCE: A QUALITATIVE RESEARCH WITH ITALIAN PARENTS

*Lorenzo Montali (Università degli Studi di Milano-Bicocca), Angelo Benozzo (Università della Valle d'Aosta)*

Western societies are predominantly characterised by a heteronormative culture, but since the 1960s the issue of the plurality of sexual and gender identities has become more visible and, in the last two decades, so have the issue of the rights these identities call for (marriage, parenthood, non-discrimination). In this context of change, the research investigates the phenomenon of coming-out in the family, focusing on the meanings that parents attribute to this revelation and investigating how it reshapes their relationship with their children. Thirteen participants were interviewed (10 mothers, age 43-63): ten with a gay son, two with a lesbian daughter and one with a bisexual daughter. The results of the thematic analysis show that the meaning of coming out tends to remain on an individual and private level, which, despite a framework of general acceptance, reinforces polarising categories (mono vs hetero) rather than opening up to the recognition of the plurality of identities and their potential fluidity. In this logic, although the participants develop expertise on the subject of homosexuality to become closer to their son's new identity, they do not socially activate for that change of a perceived hostile environment which they nevertheless hope to see.

## “TRANSFORMING” RESIDENTIAL TREATMENT FOR MOTHERS WITH CHILDREN THROUGH RESEARCH. A SITUATED APPROACH TO SUPPORT SOCIAL EDUCATORS IN THEIR EVERYDAY WORK

*Marzia Saglietti (Sapienza Università di Roma)*

Following Italian Guidelines for Residential Care for Children (2017), residential treatment for mothers with children (RTMC) consists in hosting facilities “balancing parenting responsibilities with children protection and care needs”. Due to continuously evolving social needs and policy requirements, RTMC is a growing reality, very little investigated by social research. For these – between many – reasons, one of the most prominent associations of the field commissioned one national investigation, upon which this paper is based. Conducted by a group of social educators-researchers – trained by the author of this paper –, this study was aimed at in-depth analyzing the state of the art of RTMC and, particularly, its everyday interaction, work, and general outcomes. To do so, four facilities were involved. Drawing on a situated approach in Social Psychology, we collected audio- and video-recorded interactive material (organizational meetings, dinnertime interaction, interviews) and, after several data sessions, we finally proposed aggregated results and suggested specific changes. This approach has proven to be particularly relevant for the educators-researchers themselves as well as for their broader work and field.

## SENSEMAKING PROCESSES DURING THE COVID-19 PANDEMIC FOR ITALIAN YOUTHS EXPERIENCED LOCKDOWN MEASURE

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The COVID-19 pandemic brought about disruptive changes in the lives of individuals, shaking the systems of meaning shared in territorial communities. Indeed, in the different phases of the pandemic and particularly in the lockdown condition, the need to construct new meanings emerged in order to understand and deal with this crisis. In order to understand how sensemaking processes were shaped in the face of collective trauma, the results of a work carried out with 36 young Italian adults aged between 21 and 25 years who submitted daily diary entries at two different times, producing 504 texts analysed with the Grounded Theory methodology, will be discussed. 15 categories emerged, grouped into three macro-categories. The central category was sensemaking as a process of adaptation to new circumstances related to the blockage, coping with the emotional, cognitive and activation reactions to such conditions by relying on coping strategies and the redefinition of primary and wider social relationships.



# THE CRUCIAL ROLE OF LANGUAGE IN COMBATING DISCRIMINATION BASED ON GENDER AND SEXUAL ORIENTATION

*Proponente: Claudia Manzi (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

Social inequalities based on gender and sexual orientation can be perpetuated through a variety of sociocultural mechanisms, with language being a particularly effective one. In this symposium, five contributions will present new insights into the social-psychology of language. In the first contribution, Menegatti and co-authors investigate whether positive and negative emotions triggered by feminine job titles favoured young women's intention to collectively act for gender equality. Pacilli et al. examined whether opposition towards feminization of professional terms was associated with stronger support of gender system justification. Carnaghi et al. examined whether homophobic ingroup-labelling likewise self-labelling, is effective to reclaim derogatory group labels or reenacts stigmatisation. Manzi and Crapolicchio experimentally tested whether a gender-inclusive written language may act as antecedent of working women's engagement and well-being, in a sample of a large Italian company. Sensales et al. analyzed the language on Facebook of three populist leaders and their followers to verify how inclusive it was towards women competing for the office of President of the Republic. The five contributions reveal the crucial role of language in combating discrimination.

## FROM SELF TO INGROUP RECLAIMING OF HOMOPHOBIC EPITHETS: A MODEL OF REAPPROPRATION

*Andrea Carnaghi (Università di Trieste), Mauro Bianchi (Università di Trieste), Fabio Fasoli (University of Surrey, UK)*

Reappropriation of derogatory group labels by minority members is a coping strategy against stigmatisation. The aim of this study is twofold. First, we intend to replicate Galinsky et al.'s findings (2013), suggesting that self-labelling (i.e., the self-referential use of a derogatory group label), compared to outgroup-labelling (i.e., the use of a derogatory group label by an outgroup member), enhances self-power and positively reframes the label. Second, we test whether ingroup-labelling (i.e., the use of a derogatory group label by an ingroup member towards another ingroup member), likewise self-labelling, is effective to reclaim derogatory group labels or, likewise outgroup-labelling, reenacts stigmatisation. Gay men (N = 177) sampled in Portugal and the UK were randomly assigned to one of three conditions: Self-labelling, ingrouplabelling, or outgroup-labelling. Results showed that participants in the ingrouplabelling condition, similarly to those in the self-labelling condition, reported enhanced self-power and appraised the label as less negative in comparison to participants in the outgroup-labelling condition

## COMMUNICATION STYLE AND WELL-BEING IN ORGANIZATIONS: DOES AN INCLUSIVE STYLE INCREASE THE EMPLOYEES' MOTIVATION?

*Claudia Manzi (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Eleonora Crapolicchio (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Valeria Amata Giannella (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

This study experimentally tests whether a gender-inclusive written language may act as antecedent of working women's engagement, gender-work identity integration, and well-being, in a sample of a large company. The study tested the effects of traditional communication vs. different forms of inclusive language, specifically the double declination or the neutral form. Participants (N=146) answered a pre-test, and then attended, divided into three different groups, a one-hour training with general information on gender stereotypes and the importance of communication. At the end of the training participants in the three groups received different instructions on which language to use in the following 4 weeks: inclusive double declination form, inclusive neutral form, and control (no instructions given). Post-test measures were administered after two weeks (T2) and one month (T3). The results show that inclusive language using double declination affects the experience of working women: women reported higher levels of gender-work identity integration, and this effect is moderated by perceived levels of gender discrimination and harassment. Inclusive language with a neutral form increases activism for gender policies, but this effect is moderated by the social dominance orientation.

## FEMININE JOB TITLES MAKE YOUNG WOMEN PRIDE BUT HINDER THEIR INTENTIONS TO COLLECTIVE ACT IN FAVOUR OF GENDER EQUALITY

*Michela Menegatti (Dipartimento di Psicologia, Università di Bologna), Francesca Prati (Dipartimento di Psicologia, Università di Bologna)*

The study examined whether the emotions triggered by reading about female professionals described with feminine job titles favoured or hindered young women's intention to collectively act in support of gender equality. Previous research has shown that professional women described with feminine suffices were perceived as less persuasive and with lower status than those presented with masculine titles. However, gender fair forms make women more visible in several professions. To provide further evidence on the effects of the use of gender fair linguistic forms, in this study young women were asked to read a brief biography of a successful women presented with a masculine vs feminine title. Then they indicated how much they felt a series of positive and negative emotions and their intentions to participate in collective action supporting gender equality. Results showed that reading about professional women described with feminine job titles led to lower intentions to collectively act in favour of gender equality and that this relation was mediated by feeling more pride and less resentment. Thus, it seems that motivations to change the status quo are triggered by the less positive and more negative emotions yielded by masculine linguistic forms.

## THE USE OF MASCULINE GENERICS IS MORE THAN A HABIT: THE RELATIONSHIP BETWEEN GENDER LANGUAGE CONSERVATISM AND CONSERVATIVE IDEOLOGIES

*Maria Giuseppina Pacilli (Università degli Studi di Perugia), Ilaria Giovannelli (Università della Valle d'Aosta), John T. Jost (New York University, USA)*

Gender hierarchy can be justified and perpetuated through a variety of sociocultural mechanisms, with language being a particularly effective one. Research has consistently showed that the practice of using masculine generics, i.e. (pro) nouns to refer to people in general - elicit a male bias in mental representations. Strategies for making language gender-fair and avoiding the negative effects of masculine generics include feminization, which is based on the explicit inclusion of women. Thus, masculine generics are replaced by feminine-masculine word pairs (e.g., in Italian; ministro/ministra, avvocato/avvocata etc.). Nevertheless, the feminization of traditionally masculine professional terms (usually high status ones) frequently breeds suspicion and hostility in the public opinion. In the present research, we developed a scale of gender language conservatism aimed to measure people's opposition towards feminization of professional terms. Our sample was comprised of 1277 Italians ( $n = 652$ , mean age 36.04,  $SD = 27.72$ ). As predicted, we found that gender language conservatism was associated with stronger support of gender system justification, social dominance orientation, sexism (both hostile and benevolent) and lower need for cognition.

## IT IS NOT A QUESTION OF GENDER! THE COMMUNICATION VIA FACEBOOK BETWEEN POPULIST LEADERS AND THEIR FOLLOWERS ABOUT THE ELECTIONS FOR THE QUIRINALE

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The elections for the Quirinale have shown how much the world of politics is androcentrically oriented, leading the parliamentary debate to reject women candidates systematically. Our study analyzed the language on Facebook of three populist leaders of different political orientation and their followers to verify how inclusive it was towards women competing for the office of President of the Republic. The analysis covered the posts (47, with 2146 words) by Giorgia Meloni (Right-wing), Matteo Salvini (Center-Right-wing), and Giuseppe Conte (Center-Left-wing) on the election of the President of the Republic in the period 1-1/3-2-2022 and the related first four more popular comments of followers (188, with 2481 words). With the Vospec step of Spad-T, applied to both the posts of the three leaders and related comments by followers, we conducted a comparative textual analysis. The results highlighted that Conte is the only one to use inclusive language, naming some of the leading women candidates alongside men, while Meloni and Salvini avoid naming candidates. There is a certain lexical correspondence between their followers, except Conte's followers, who do not mention any women candidates in the comments. Examples of sentences illustrate the type of language used and its contents.

# THE MULTIMODAL HUMILITY OF PERSUASIVE LEADERS WHEN TALK ABOUT MORAL ISSUES

*Proponente: Francesca D'Errico (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

The study of the persuasive leadership has mainly focused on the dimension of power, and dominance, neglecting on the other hand dimensions such as responsive humility (D'Errico, Bull & Leone, 2022), featured by informality, empathy and with an 'horizontal' relationship with the voter. In this perspective become crucial the visual and multimodal approach to the understanding of humility even because, political communication becomes increasingly 'dis-intermediated'. The aim of the symposium is to investigate the persuasive dimension of 'responsive humility' through speeches and the body, especially in relation the 'moral' topic. D'Errico shows the features of political humility, with particular attention to the potential effects on the audience. Scardigno and Mininni analyzes the multimodal speech of Pope Francis during the pandemic. Leone, Mastropietro, Bull and D'Errico examine the effects of Obama's humble stance during his sharing of autobiographical memories to students, underlining the importance of facial expressions. Finally, Lamponi and Paciello highlight how the benevolent approach of a European leader when talking about immigrants' hosting can elicit empathic emotions towards an audience considering their moral domains and political orientation.

## HUMBLE POLITICIANS, THEIR MULTIMODAL BODILY EXPRESSIONS AND POTENTIAL VOTERS

*Francesca D'Errico (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

The notion of humility has been neglected in the field of political communication in favor of the persuasive strength of a dominant leader. Political Humility can be defined here as an interpersonal and epistemic stance aimed, on one side, at involving the interlocutor in an empathic and horizontal relation, on the other, at admitting possible shortcomings in one's own knowledge or competence, as inherent in the human nature (D'Errico, Bull & Leone, 2022). The present contribution has an observational side since it is firstly aimed at exploring politicians' postures, prosodic features, gazing and facial expressions specifically when they convey a humble content. The second aim was pursued by means a questionnaire submitted to a sample of 82 participants, balanced for gender, and it highlights the socio-psychological features of humble leaders' potential voters by investigating their emotional and evaluative reactions. The psychological differences were self-esteem, the evaluation of moral relevance and dominance orientation. Results reveal that social dominance is a good predictor of negative emotions and evaluations elicited by a humble politician, while self-esteem and moral sensitivity are best predictors of positive emotions and positive evaluations of a humble politician.



## HOW DO BENEVOLENT STANCE CAN ELICIT USERS' EMOTIONS? THE ROLE OF INDIVIDUAL MORAL SYSTEMS AND POLICAL ORIENTATION IN UNDERSTANDING CITIZENS'S EMOTIONAL RESPONSES IN ONLINE CONTEXTS

*Ernestina Lamponi (Uninettuno University), Marinella Paciello (Uninettuno University)*

Increasingly the psycho-social literature on Social Network highlights online contexts as highly polarized environments. This happens especially on ethically relevant issues (e.g. immigration). Recent studies show that political sources in online contexts often employ emotionally charged communication, and online discussions take the form of radicalized arenas (D'Errico & Paciello, 2018). In order to understand how and whether users' emotional responses in online contexts may differ across the type of communication and according to the individual moral system, a quali-quantitative study was performed (N=306, F=58.5%). The aim is to explore the relationships between individual Moral Foundations (Graham et al., 2009) including political orientation and citizens' emotional responses in public debates. The analysis object concerns the emotional effects elicited by distinct online posts conveyed by potential European leader on the issue of migrant hosting reception through the use of three different communication styles: the first related to benevolence; the second to the respect of laws; the third a message of control. The results confirm that the users' emotions change according to the style of the message, mainly depending on the individual moral system and political orientation.

## PRESIDENT OBAMA'S HUMBLE FACE: AN AUTHENTIC OR A SOCIALLY DESIRABLE POSTURING? A STUDY ON REACTIONS TO OBAMA'S AUTOBIOGRAPHICAL SELF-DISCLOSURES

*Giovanna Leone (Sapienza Università di Roma), Alessia Mastropietro (Sapienza Università di Roma), Peter Bull (University of York, UK), Francesca D'Errico (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

Referring to the mainstream studies which positively evaluates signals of dominance shown by leaders, the analysis of Obama's rhetoric stays as a relevant exception. His risky recall, during his political talks, of the social difficulties experienced, was in fact one of the more surprising aspects of his success. Nevertheless, reactions to his autobiographical sharing were scarcely explored. Based on the idea that these self-disclosures signal his responsivity towards audience of low social condition and can therefore be defined as a sign of humility, the present research aims to test if coherence between Obama's words and his facial expressions of contempt, due to the seriousness of social injustices endured in his childhood, may influence the receivers' perception. Before reading a brief autobiographical sharing, 175 Italian participants were presented with a photo of Obama displaying either an expression of contempt or a social smile. Results show that a facial expression of contempt, coherent with words, is crucial for perceiving this humble political discourse as authentic, and not as a simple socially desirable posturing. More research seems however needed, to understand how humble speech could enhance the positive face of leaders or backfire against them.

## THE HUMBLE LEADERSHIP OF POPE FRANCIS IN THE COVID-19 PANDEMIC

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During uncertain times, people try to restore their membership and to reinforce their identity, working as socio-cultural anchorages and existential resources functional to their wellbeing. In this scenario, the figure of leader plays an essential role, since it combines the need for renovation coming from the “systems of meanings” (Park, 2005) and the expectations deriving from the “systems of communications” (Pace, 2013), supporting the process of beliefs, values and sense restructuring. In several crisis, Pope Francis embodies a leadership style that, starting from the “rhetoric of the unexpected” (Caffi 2015) and through a “digital leadership” (Narbona, 2016), joins to the new psychology of leadership, mainly focused on the value of “we-ness” (Parry et al., 2019). In this background, we propose a discursive and multimodal analysis of an unprecedented global media event, the Universal Prayer with Urbi et Orbi Blessing on 27th march 2020, in the middle of the first wave of COVID-19 pandemic, in the evocative setting of the desert St Peter’s Square. The proposed analysis converge in defining Pope Francis as a “humble” leader, since He emphasized the features of Essentiality, Equality and Non-Superiority both in discursive-argumentative choices and in the multimodal expressions.

# THE PSYCHOLOGICAL AND SOCIAL DIMENSIONS OF HUMAN-ROBOT INTERACTION

*Proponenti: Silvia Di Battista (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Monica Pivetti (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

The application of robotics in many areas of our daily lives is one of the most significant changes in recent years. Robotic technologies are increasingly being used in various settings, from healthcare to the domestic sphere, as well as in the provision of social care for elderly people. Robots are performing many of the tasks that were previously carried out by humans and in contexts where they have to interact with humans. For example, they can be used in social services, providing assistance and companionship to elderly people. They can be also used as tools for teaching activities for special needs students, to reduce the students' risk of dropping out or to foster inclusion and cooperation. The increasing application of robotics has paved the way to fruitful research work on aspects of the human-robot interaction, with the aim of investigating and understanding the significant benefits of such an innovation. This interaction has also led to the consideration of other issues, including persons' tendency to imbue robots with human characteristics or perceptions concerning safety or errors. This symposium delivers four talks on the ways in which people perceive, elaborate and intend to use robotics, aiming to trigger a discussion on the acceptance of robots in our daily lives.

## ACCEPTANCE OF ROBOTICS IN PSYCHOLOGICAL SETTINGS: A STARTING OR ENDING POINT?

*Daniela Conti (Dipartimento di Scienze Umanistiche, Università di Catania), Alessandro Di Nuovo (Sheffield Hallam University, UK)*

In the last decades, various researches in the field of robotics have created numerous opportunities for innovative support of the young and adult population. The goal of this intervention will be to review and highlight how social robots can help the daily life of people, and be useful also as assessment tools by practitioners. We will underline the aspects of usability and acceptability of robotic supports in the psychosocial work with children and adult. The actual usability of the system influences the perception of the ease of use only when the user has no or low experience, while expert users' perception is related to their attitude towards the robot. This finding should be more deeply analyzed because it may have a strong influence on the design of future interfaces for Human-Robot Interaction (HRI). Robots can play an important role to tackle the societal challenge in the educational field, in the assessment, in the psychological-rehabilitative intervention, and of the growing the older population. The authors report some recent studies with users, where it was demonstrated that the acceptability of robotics during daily life activities, and also in cognitive evaluation, could be supported by social robots.

## DO ROBOT FACES REALLY LOOK HUMAN? SCRAMBLED EFFECT AND COGNITIVE ANTHROPOMORPHISM OF HUMANOID ROBOTS

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In this HRI research we conducted 3 experimental studies (N=390) to test whether people cognitively anthropomorphize faces of humanoid robots (HR), and if the levels of human likeness affect such an elaboration. For the first time in this field, we employed a scrambled face (SF) task, which proves that social stimuli, as perceived via configural processing, are recognized less accurately when the relations among their parts are disrupted. Non-social stimuli (i.e., objects) are not subjected to this, as they are perceived via analytical processing. Mixed-model analyses revealed that the SF effect emerged both for humans and HR when first-order relations among the stimulus parts (i.e., the relative positions) are disrupted – although the size of the effect was significantly greater for human faces than for HR with high and medium humanlikeness (Exp. 1). Furthermore, when second-order relations (i.e., metric distances) were disrupted, the SF effect emerged for human faces only (Exp. 2). However, when the stimulus category (human vs. HR) was not made salient before the task, the SF effect emerged both for humans and high humanlike HR (Exp. 3). Taken together, these findings suggest that the cognitive elaboration of HR is influenced by different aspects of the configural processing.

## UNDERSTANDING THE COGNITIVE STRATEGIES BEHIND ROBOTIC PROGRAMMING: A QUALITATIVE STUDY ON THE CONCEPT OF PROGRAMMING ERROR

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Programming involves making and debugging errors. Different programmers may have different conceptions of what constitutes an error, and this may orient their behaviour and reasoning through different routes. This study starts from the hypothesis, drawn from the literature, that the criteria may be (1) behavioural: an error is a piece of code causing unexpected behaviour in the robot; (2) stylistic: a program whose structure significantly deviates from the programming rules and styles that are commonly accepted by the community of experts is wrong (even though it produces the expected results). This study specifically focuses on teachers. Twenty teachers from primary and secondary Italian schools, who usually carry out educational robotics activities, participated in a semi-structured interview. The goal was to understand whether their conception of error conformed to (1) or (2). The data were qualitatively analysed via Nvivo12. The results favour hypothesis (1), although, contrary to the authors' expectations, some teachers occasionally adopted criterion (2) as well (samples of the interviews will be provided). This result will be discussed in connection with the teachers' cultural backgrounds and relevant expertise.

## EDUCATIONAL ROBOTICS FOR AN INCLUSIVE EDUCATION: INTENTION TO USE EDUCATIONAL ROBOTICS AMONG LEARNING SUPPORT TEACHERS

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Teachers play a key role in an inclusive teaching practice via the use of Educational Robotics (ER). In Study 1, we validated the Unified Theory of Acceptance and Use of Technology directed to measure the acceptance of ER in a sample of 319 learning support teachers' (LST) via structural equation modelling. Results showed that perceptions of robotics' usefulness and adaptability were related to the intention to use ER. In Study 2, perceptions and intention to use ER with students at an economic, cultural and linguistic disadvantage and with neurodevelopmental disorders were measured in 187 LST with different levels of expertise in ER. Results showed that, in regard to the economic, cultural and linguistic disadvantages, intention to use was related to perception of usefulness and adaptability; in the case of the neurodevelopmental disorders, intention to use was related to the perception of adaptability and teachers' expertise. In Study 3, we investigated gender-differentiated behavioural intentions of 158 LST reading one of two vignettes regarding a student failing an ER activity (a male student or a female student). Results indicated that LST with high levels of gender stereotypes declared less intention to use ER with the female student as compared with the male one.



## THE PSYCHOLOGY OF ATTITUDES IN ITALY: RECENT EVIDENCE AND NEW PERSPECTIVES

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The psychology of attitudes has made great progress in Italy in the last decade, with numerous theoretical and methodological contributions that fostered the development of knowledge in the field. The idea of organizing a symposium is rooted in this premise. The goal is to create an occasion during which summarizing the most recent contributions on the issue and encourage the reflection and the debate about future perspectives in the study of attitudes. In the first part of the symposium will be presented recent contributions, based on implicit and explicit measures, about the formation of attitudes. In particular, one will be dedicated to vicarious effects of behavior on the formation of attitudes, and the other on the effects of experienced discrimination on discrimination beliefs. Then, will be presented works with a focus on cognitive and affective aspects of attitudes in the context of persuasion and in the context of attitude-behavior relationship. In this way, it will be possible to cover the main topics of the discipline: attitudes formation, their change, their measurement, and their relation with behaviour.

## I LIKE IT 'CAUSE YOU TAKE IT: VICARIOUS EFFECTS OF APPROACH/AVOIDANCE

*Cristina Zogmaister (Università degli Studi di Milano-Bicocca)*

With five studies, I investigated the effects of learning that others have performed approach and avoidance behaviours. In Experiment 1, when participants learned that a fictitious character had approached a previously unknown product, they ascribed them a liking for the object. In contrast, the model was ascribed a disliking for the avoided product. In Experiment 2, this result emerged, with smaller effect size, even when it was clear that the model had been a mere executor, without free agency. Finally, Experiments 3, 4, and 5 showed, with direct and indirect measures of attitudes, that reading that the model had approached vs avoided products was sufficient to create preferences in the participant for the approached one, regardless of whether it was made clear that the model was a mere executor. Overall, this research highlights the largely unexplored effects of vicarious approach/avoidance behaviours. I will discuss the theoretical and practical implications and some possible developments of this line of research.

## IMPLICIT AND EXPLICIT GENDER DISCRIMINATION BELIEFS

*Chiara Guida (Università degli Studi della Campania 'Luigi Vanvitelli'), Maddalena Marini (Università degli Studi della Campania 'Luigi Vanvitelli')*

The belief that men, not women, are the most discriminated against and oppressed in society, has been promoted in recent decades by various groups and individuals. Yet despite its potential theoretical and practical importance, people's beliefs about gender discrimination have not been explored and measured. Here we performed such research. We employed explicit and implicit measures to investigate beliefs about gender discrimination in the general population. In addition, we explored whether these beliefs were associated with specific features of the test-taking sample—such as subject's gender, experience of gender discrimination, and gender attitudes. Overall, results showed an implicit and explicit belief that women are the primary target of discrimination. No difference emerged between women and men. However, an indirect effect of the gender was observed. This effect was mediated by participants' experience of discrimination, i.e. women showed stronger beliefs as they experienced more often gender discrimination than men. No significant indirect effect of gender was found through gender attitudes. These results suggest that gender discrimination beliefs are not the product of a gender preference but are influenced by personal experience of discrimination.

## THE MODERATING EFFECT OF NEED FOR AFFECT AND COGNITION ON THE RELATION BETWEEN PERSUASIVE COMMUNICATION ABOUT LOCKDOWN AND ATTITUDES TOWARD IT

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The literature has shown that people with an affective individual orientation (NFA) are persuaded by an affective message (affective correspondence), while people with an individual cognitive orientation (NFC) are persuaded by a cognitive message (cognitive correspondence). This study aims to make a further step in understanding the matching effect by investigating the moderating of NFA and NFC on the response to persuasive communication about lockdown characterized by affective and cognitive contents of positive and negative valence. After completing the NFA and NFC measurements, 1003 participants read a tweet about the lockdown in one of the conditions resulting from a 2 (Content: Affective vs Cognitive) X 2 (Valence: Positive vs Negative) design. Subsequently, the participants expressed their attitude towards lockdown through a semantic differential. The results showed that participants with high NFA and low NFC report a more positive attitude towards lockdown than other participants when exposed to an affective message with positive valence. These results enrich the comprehension of the matching effect by providing interesting suggestions about the composition of persuasive messages in health contexts.

## INSTRUMENTAL AND EXPERIENTIAL ATTITUDE IN THE THEORY OF PLANNED BEHAVIOR: THE CASE OF PREDICTING PHYSICAL ACTIVITY

*Francesco La Barbera (Dipartimento di Scienze Politiche, Università degli Studi di Napoli Federico II), Icek Ajzen (Department of Psychological and Brain Sciences, University of Massachusetts Amherst, USA)*

The theory of planned behavior (TPB) has sometimes been faulted for not taking sufficient account of affective factors influencing human intentions and behavior. However, recent formulations of the TPB have drawn an explicit distinction between two dimensions of attitude, the instrumental and the experiential dimensions. Experiential attitude is connected to the (anticipated/self-reported) affective experience and has been often found to be more predictive than instrumental attitude. Nevertheless, most TPB research tends to focus only on the instrumental dimension. In addition, when attitudes are measured by means of items referring to both the dimensions, they are usually combined into a single score, without showing the different associations of the two dimensions with participants' intentions. In sum, the available evidence suggests that it is important to distinguish between the experiential and instrumental dimensions of attitude, and more work is required regarding the operationalization and the comparative predictive validity of these dimensions. In the current contribution we will discuss these points with reference to a data collection on physical activity intentions.

# THE SOCIAL PSYCHOLOGY OF ENERGY TRANSITION

*Proponente: Marino Bonaiuto (Sapienza Università di Roma)*

The global energy transition has a fundamental neglected social component. Technological innovations develop towards decarbonisation, but transition to renewable sustainable forms of energy requires new technologies to be perceived as acceptable, to be intended as accepted, to be adopted by the general public. People need to change energy habits. This transition entails complex iterative co-creation processes involving stakeholders and the public, but the bottom line are social-psychological factors capable of favoring acceptability attitudes, acceptance intentions, and behavioral adoption of renewable sustainable energy technologies. This symposium presents recent researches (in three cases from different EC projects) on some of the factors facilitating or hindering such an acceptability and acceptance within different contexts, namely: the issue of household energy system (Fornara et al.); the technological and contextual factors favouring biofuels acceptance (Dessi et al.); the contextual tipping point favouring decarbonisation choices (Biddau et al.); the role of communication features facilitating compliance with energy financial costs (Bertolotti et al.); the role of communication features for the energy economic performance (Ludovico, Ruzzenenti).

## THE ANTECEDENTS OF THE INTENTION TO USE SUSTAINABLE ENERGY SYSTEMS AT HOUSEHOLD LEVEL: A MODEL COMPARISON

*Ferdinando Fornara (Università di Cagliari), Sara Manca (Università di Cagliari), Daniela Meleddu (Università di Cagliari), Elisabetta Strazzera (Università di Cagliari)*

This contribution concerns a study included in the IDEAS project, funded by the EC H2020 Programme, that aims at developing an innovative building integrated renewable energy system. Given that people often show resistance in accepting new technologies, it is important to understand which factors play a significant role in the future intention to install a residential heating system sustainability-oriented. The general aim of the study was to test and compare different theoretical models, i.e. Value-Belief-Norm, VBN (Stern et al., 1999, Theory of Planned Behaviour, TPB (Ajzen, 1985), and Diffusion Of Innovations, DOI (Rogers, 1962), predicting the intention to use the IDEAS innovative energy system in potential customers. A quota sampling for gender, age and geographical area was used for recruiting participants (N=3000), half Italian and half Irish, all homeowners, who completed an online questionnaire including measures of the VBN, TPB, and DOI. SEM results confirm the goodness of the three theoretical models across the two different contexts. Further outcomes will be discussed in the light of the pertinent literature.

## DETERMINANTS OF RENEWABLE AND SUSTAINABLE ENERGY TECHNOLOGIES ACCEPTANCE: A COMPREHENSIVE EXPLANATORY MODEL FOR THE BIOFUEL CASE

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Studies on the acceptance of sustainable energy technologies have grown exponentially over the past few decades, but while there are a large number of both psychological and interdisciplinary models that have attempted to explain the acceptance, there is no all-encompassing model. Developed within the ABC-Salt H2020 project, this contribution presents two studies that aim, on the one hand, to develop some scales to measure the psychological variables relevant for understanding people's attitude towards biofuels acceptance; and on the other hand, to propose an integrated model that includes these variables with those already included in previous models, such as the one proposed to by the Sustainable Energy Technology Adoption (SETA) framework. Results allow to validate a set of new scales aimed at measuring three main areas of the believes people have about biofuels: technology aspects, economic aspects, and environmental aspects; moreover, two models, integrating these new variables with those traditionally employed by SETA, are tested on a sample of expert stakeholders and a sample of non-expert stakeholders. Implications for policy makers and biofuel stakeholders will be discussed.



## EXPLORING THE PSYCHOSOCIAL PATTERNS SUSTAINING LOCK-IN AND PATH DEPENDENCY IN PHASE-OUT PROCESSES: A CASE STUDY IN SULCIS COAL REGION

*Fulvio Biddau (Università degli Studi di Padova), Paolo Cottone (Università degli Studi di Padova), Mauro Sarrica (Sapienza Università di Roma)*

Phase-out processes are highly susceptible to path dependency and multiple lock-in mechanisms. In this contribution, we will focus on the socio-psychological challenges of coal phase-out in coal regions. Indeed, these communities are involved in a struggle over the old and the new, as they must navigate a destabilization-reconfiguration pathway where phase-out and innovations interact. Drawing on a case study of a coal and carbon-intensive region (Sulcis, Sardinia), we examine how social-psychological factors actively reinforce lock-in and path dependency, undermining decarbonization policies and just transitions. Using a mixed-method approach - collecting local newspaper articles (2010-2020), 25 interviews and 2 workshops with stakeholders, - we examine how memory, identity, sense of place, and justice perceptions contribute to carbon lock-in. The results show a contrast between collective memory and identity based on industrial myth and well-being and another one suffering neocolonialism and subalternity. These factors orient community coping, aspirations, and the envisioning of alternative transition pathways. We discuss the theoretical implications and suggest policy interventions that may deliberately destabilize psychosocial lock-in and promote knock-on effects.

## “IF IT WEREN’T FOR COVID...”: THE EFFECTS OF COUNTERFACTUAL COMMUNICATION ON SUPPORT FOR THE ENERGY TRANSITION

*Mauro Bertolotti (Università Cattolica del Sacro Cuore), Luca Guido Valla (Università Cattolica del Sacro Cuore), Patrizia Catellani (Università Cattolica del Sacro Cuore)*

Although citizens are well aware of the issue of climate change, many of them are concerned about the costs of the energy transition. Such concern is further deepened by new emergencies, such as the COVID-19 pandemic. In three experimental studies, we investigated the factors that promote or reduce support for the energy transition, focusing on the effects of communication about the economic cost of such policies. Particularly, we compared prefactual (e.g., “If we invest in renewable energies, we will face huge costs”) and counterfactual messages (e.g., “If we had not already spent money to tackle the pandemic, ...”) (Study 1). We then manipulated the presence or absence of the pandemic in two hypothetical scenarios (Study 2), and explored the effects of different ways of presenting its consequences on public health on policy support (Study 3). Moreover, we assessed the role of individual factors such as climate change belief, biospheric values and support for anti-COVID measures. Results showed that counterfactual messages might induce a moral licensing effect, by reducing support for policies pursuing the energy transition. Such effect may depend on how the pandemic affects the evaluation of costs and benefits of climate change policies, and on individual beliefs and values.

## THE GREEN INTELLECTUAL CAPITAL OF THE ENERGY SECTOR: A WEB-BASED INVESTIGATION ON EUROPEAN FIRMS' CONTRIBUTION TO SUSTAINABILITY

*Nuccio Ludovico (Integrated Research on Energy, Environment and Society, Faculty of Science and Engineering, University of Groningen, Netherlands), Franco Ruzzenenti (Integrated Research on Energy, Environment and Society, Faculty of Science and Engineering, University of Groningen, Netherlands)*

Our common goal towards energy transition needs a concerted effort aimed at restructuring production and consumption processes in a sustainable way. However, organizations involvement in the transition process is still challenging due to the widespread perception that green investments are economically unsustainable. This study, conducted on 1890 firms from the energy sector of 8 European countries, aims to explore the link between knowledge-based assets related to green innovations and both economic performance and firms' contribution to the national transition process. Data mining techniques and network analysis have been used to analyze the impact that intangible assets, namely Sustainability Consciousness and Green Intellectual Capital, revealed by online disclosed firms' communication, have on economic performance. Moreover, the effect of these intangible assets on the sustainable energy performances of countries in which organizations operate has been analyzed. The results show that intangible assets related to green innovations have a positive impact on firms' economic performance and national sustainable performance. Overall, findings show that focusing on their intangible assets, firms can improve their business performance while contributing to sustainable development.

# THE SOCIAL PSYCHOLOGY OF SEXUAL ORIENTATIONS AND GENDER IDENTITIES

*Proponenti: Stefano Ciaffoni (Dipartimento di Psicologia, Università di Bologna), Marco Salvati (Dipartimento di Psicologia, Università di Bologna)*

The proposal of the Zan bill, eventually rejected in the Senate, led Italians to be once again spiritedly involved in a social and political debate on sexual minorities' rights. The content of people's arguments confirmed the need for the dissemination of accurate knowledge about LGBTQ+ people and called for the intervention of the scientific community. Social psychology can offer a privileged standpoint in this process, by providing theoretically grounded and evidence-based responses to issues around sexual and gender identities. Stemming from an intersectional framework, this symposium intends to value these important themes, and to be part of this necessary dialogue, gathering contributions that consider the multiple social identities and different experiences of many of the letters composing the LGBTQ+ acronym, which meaning is often ignored. From bisexualities to the experiences of the trans people, from the experiences of older queer people to assisted reproduction for same-sex parents' families, this symposium proposes an opportunity to reflect and discuss issues that characterise contemporary LGBTQ+ people, hoping that it might provide new insights by advancing scientific knowledge as well as constituting a good starting point for promoting social progress in practice.

## COMBINING SOCIAL CONCEPTS: THE CASE OF AGE AND SEXUAL ORIENTATION CATEGORIES INTERSECTION

*Rosandra Coladonato (Dipartimento di Scienze della Vita, Università di Trieste), Vincent Yzerbyt (Université catholique de Louvain, Belgium), Andrea Carnaghi (Università di Trieste)*

Recent research hypothesized that Elderly gay men (i.e., EGM) were stereotyped as less old and younger than Elderly men (i.e., EM) because considered an atypical subtype of both EM and Gay men (i.e., GM) constituent categories. Three studies (Ntot = 364) were run to directly test the perceived (a)typicality of EGM with respect to age (Study1) and sexual orientation categories (Study2). Also, we tested whether, and to what extent, traits associated with EGM overlap with those associated with its constituent categories (Study3). Study1 showed that EGM were perceived as less typical of EM than Elderly heterosexual men (i.e., EHM). Study2 showed that EGM were perceived as less typical of GM than Young gay men. Study3 tested whether the atypical intersectional category of EGM would display unique traits that are not the result of simply adding the traits of the constituent categories (i.e., EM + GM). We specially predict that the number of unique traits listed for EGM will be higher than the number of traits listed for other intersectional categories (e.g., EHM). Overall, the unique traits associated with EGM distance this group from both EM and GM prototypes, contributing to the atypicality perception of EGM relative to EM and GM.

## ATTITUDES TOWARD HETEROSEXUAL, SAME-SEX AND TRANSGENDER COUPLES WHO ARE PLANNING TO ADOPT CHILDREN

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Negative attitudes toward same-sex parenting have been documented. However, there is still need for studies to explore attitudes toward parenting by transgender individuals. This quasi-experimental study explored attitudes toward transgender parents in Italy, the UK, Portugal and Israel. In two preliminary studies, heterosexual participants (Italian: N = 214; English: N = 211) read one of five vignettes with gay, lesbian, MtoF, FtoM, different-sex couples seeking child adoption. After reading the vignette, the participants rated the expectations about the development of a girl and a boy awaiting adoption and indicated their willingness to support the adoption. Participants also gave their attitudes toward LGBT people. Results showed that Italian participants high in sexual prejudice perceived adoptive children with same-sex parents or trans-parents as being more at risk in their development compared to children with different-sex parents. Both Italian and UK participants high in sexual prejudice indicated less willingness to support adoption in the case of non-traditional caregivers compared to different-sex couples. Future analyses will consider whether participants differed in their willingness to ascribe developmental risks or gains depending upon the depicted family type.

## TRANSNORMATIVITY AND MARGINALIZATION OF TRANS PEOPLE ON ITALIAN MAINSTREAM TV PROGRAMMES

*Francesco Serri (Università di Cagliari), Diego Lasio (Università di Cagliari), Margherita Angioni (Università di Cagliari), João Manuel De Oliveira (ISCTE Instituto Universitário de Lisboa, Portugal)*

In the last decades, a trend toward more positive representation of trans people in mainstream media have contributed to a more complex understanding of their subjectivities by the general public. However, research has shown that the representation of trans people is framed in the gender binary model to make them more understandable to the cisgender gaze. While transnormativity has been considered a guarantee of social legitimacy for trans individuals who are framed within the medical-surgical model, this paper shows that transnormative narratives do not guarantee their full inclusion within the heteronormative hegemonic order. A Critical Discourse Analysis of mainstream Italian television programmes highlights that while TV programmes operate a normalisation of trans characters through transnormative narratives, they simultaneously create discursive traps to maintain their marginalisation from the cisnormative order. These findings show that trans individuals who embody gender norms are kept at the margins because they challenge the normative order as they show that gender is not fixed and natural, but fluid and socially constructed.

## MYSELF, US AND THEM OUT OF THE BINARY: CONSTRUCTING BISEXUAL AND PANSEXUAL STORIES IN A BINARY WORLD

*Aurelio Castro (Università di Bologna), Paola Villano (Università di Bologna), Alex Marson (Università di Bologna)*

Decades of bi+ activism, research, and politics highlighted how Western societies enforce binary understandings of sexes, genders, and sexual orientations to maintain their own hegemonic structures. Resisting these binarism, bisexual communities thrive and struggle within and outside LG spaces, between hetero and homonormativity, accusing bisexuals of weakening the stability of their orientation and demands. Without support from LG groups, bi + people face more difficulties, have worse health conditions, more minority-stress and higher rates of IPV. This contribution presents narrative research on the bi+ identity construction of 54 participants, attracted to more than one gender, on how they negotiate their identities in relevant networks. The quali-quantitative interview showed the validity and reaffirming of their sexual orientations as well as the strategies for finding authenticity in a binary world. Bi+ people often avoid LG associations due to biphobia, rejection, fetishization or because they anticipate the delegitimization of their orientation. The study highlights how sexual orientation construction shapes the biographies and experiences of Bi + people who thrive in a monosexual world devoid of representation, politics, and spaces for bisexualities.



## INTERNALIZED SEXUAL STIGMA AND LGBTQ CONSPIRACY BELIEFS: THE RELATIONSHIPS WITH CIVIL DISENGAGEMENT IN A SAMPLE OF GAY, LESBIAN AND BISEXUAL PEOPLE

*Marco Salvati (Dipartimento di Scienze Umane, Università di Verona)*

Previous literature showed that gay, lesbian, and bisexual's (LGB) internalized sexual stigma (ISS) is associated with lower support to LGBTQ civil rights (i.e., same-sex marriage, adoption for same-sex couples, etc.), lower sense of belonging to the LGBTQ community, and lower intentions to engage in collective actions to promote social equality for LGBTQ people. This contribution suggests that ISS is also associated with LGBTQ conspiracy beliefs (CBs), which refer to the existence of a Gay Lobby which aims at the spread of homosexuality, the indoctrination of children in schools, the subversion of the natural order, and the establishment of a dictatorship of single thought based on Gender Theory' (a neologism devoid of any scientific value). Involving more than 250 LGB participants, preliminary results about a serial mediational model showed that LGBTQ CBs can mediate the negative associations of ISS with the support to LGBTQ rights and with collective actions intentions to promote social equality for LGBTQ people. This suggests that LGBTQ CBs can also take hold on LGBTQ individuals, particularly among those with high ISS, leading them to a social disengagement for the improvement of their own well-being and social status. Limitations and further directions will be discussed.

# UNRAVELLING THE INDIVIDUAL AND GROUP-BASED VARIABLES ASSOCIATED WITH INDIVIDUALS' BEHAVIOURAL AND PSYCHOLOGICAL REACTIONS TO THE COVID-19 PANDEMIC

*Proponenti: Soraya Elizabeth Shamloo (Università degli Studi di Modena e Reggio Emilia), Laura Ferrari (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

The COVID-19 pandemic has been a delicate and life-changing experience. Although we have now moved towards a new phase of the pandemic, research is still hardly working on understanding what brings individuals to engage in preventive behaviours and enhance their well-being. The symposium considers a wide range of variables associated with individuals' behavioural/psychological reactions to the pandemic. Trifletti et al. focused on individual cultural orientations (individualism and collectivism) by testing their association with preventive behaviours and the factors underlying this link. Visintin considered group-based dynamics by investigating whether contact with older people (a group very vulnerable to coronavirus) would be positively associated with behaviours aimed at reducing COVID-19 spread, often framed as necessary to protect the health of older people. Relations with others, in terms of closeness, were considered by Shamloo who found that closeness reduced intentions to engage in preventive behaviours via lower risk perception. Finally, Ranieri et al. focused on relational resources, considering the interplay between couple (dyadic coping) and parental (parent-child relationship quality) bond and their potential protective role for children's psychological well-being.

## FAMILIES FACING COVID-19: THE ROLE OF COUPLE AND PARENTAL RELATIONSHIP IN PROMOTING CHILDREN'S ADJUSTMENT

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The COVID-19 pandemic has been an acute threat and has posed significant challenges to families' functioning and well-being and the consequences of these difficulties are likely to be long lasting. In particular, previous studies have shown the negative effects of coronavirus on children's psychosocial adjustment, making prominent to investigate the relational resources that may contribute to the promotion and maintenance of healthy and adaptive development of children even during very challenging situations such as the COVID-19. This study investigated the interplay between couple (dyadic coping) and parental (parent-child relationship quality) bonds, testing, through a path analysis model, the mediating role of parent-child relationship in the association between dyadic coping and children's adjustment (emotional difficulties). Participants were 591 Italian parents, who filled in an online self-reported questionnaire. Findings highlighted the protective role played by dyadic coping in reducing children's maladjustment, both directly and indirectly through parent-child relationship. Practical implications of these results for family enrichment interventions and further expansion of the study will be discussed.

## TOO CLOSE TO KEEP SOCIAL DISTANCE: CLOSENESS IN RELATIONSHIPS AND (DIS)ENGAGEMENT IN PREVENTIVE BEHAVIOURS DURING THE COVID-19 PANDEMIC

*Soraya Elizabeth Shamloo (Università degli Studi di Modena e Reggio Emilia)*

The sudden COVID-19 pandemic has been a delicate and life-changing experience. Research is still hardly working on defining what leads individuals to engage (vs. disengage) in preventive behaviours. We focus on interpersonal relationships by investigating whether preventive behaviours when in the presence of others may be a function of the type of relationship (in terms of closeness) one has with others. Specifically, close others are often perceived similar to the self and trusted compared to strangers. Thus, close relationships may inadvertently reduce COVID-19 risk perceptions which may ultimately decrease preventive behaviours when in their presence. 747 respondents answered to one out of four versions of a questionnaire differing on the target (i.e., friends vs. parents vs. grandparents vs. strangers), rated COVID-19 risk perceptions and intentions to engage in preventive behaviours. Close relationships (i.e., with friends, parents, and grandparents) compared to non-close relationships (i.e., with strangers) predicted lower intentions to engage in preventive behaviours via lower risk perceptions. Results suggest that unconscious biases may arise when in the presence of close others which could contribute to decrease preventive behaviours during the COVID-19 pandemic.

## MOVED BY TWO LEVERS: SELF- AND OTHER-DIRECTED MOTIVATIONS MEDIATE THE RELATIONSHIP BETWEEN INDIVIDUALISM-COLLECTIVISM AND COMPLIANCE WITH PREVENTIVE BEHAVIOURS DURING THE COVID-19 PANDEMIC

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The COVID-19 pandemic has posed a serious threat to people's health worldwide. SARS-CoV-2 can cause serious illness and death and it is highly transmissible. To limit its spread, people in many countries have been encouraged to adopt precautions, such as wearing masks, washing hands frequently, social distancing. Compliance with these preventive behaviours has been crucial to slow down infections and identifying its predictors has become a priority. Several possible predictors were found, among which individualist and collectivist orientations. In this study, we show how compliance with preventive behaviours is shaped by individualist and collectivist orientations through different motivational factors. Participants (N=223) completed measures of individualism/collectivism, motivational orientations (directed to the self, to close others, to the group), past preventive behaviours, behavioral intentions. Results showed that the relationship between horizontal/vertical individualism and behaviours/intentions was mediated by self-interest, while vertical collectivism was associated with preventive behaviours/intentions through the desire to protect close others. Findings have important implications for public health communication aimed at enhancing engagement in preventive measures.

## INTERGENERATIONAL CONTACT AND AGEISM PREDICT PREVENTIVE ATTITUDES AND BEHAVIORS DURING THE COVID-19 PANDEMIC

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Mass media and research have framed the COVID-19 pandemic as an intergenerational issue. Indeed, the vulnerability of older people to COVID-19 has been stressed in political discourse and mass media, with the call to protect older adults. Therefore, attitudes and behaviors aimed at reducing the spread of coronavirus, such as properly wearing masks, getting COVID-19 vaccination, and supporting the green pass policy, may be seen as attitudes and behaviors aimed at protecting the health of older people. Hence, the current research investigated whether contact with older people and ageism are associated with preventive behaviors aimed at reducing the spread of coronavirus (Study 1, N = 371) and with attitudes toward the green pass (Study 2, N = 153). In line with hypotheses, positive attitudes toward older people were positively associated with preventive behaviors (Study 1) and with positive attitudes toward the green pass, controlling for attitudes toward vaccinations (Study 2). Further, quality of contacts with older people before the pandemic was associated with preventive behaviors (Study 1) and with positive attitudes toward the green pass (Study 2) via attitudes toward older people. The role of intergenerational contact and ageism for public health will be discussed.

# YOUNG MIGRANTS BETWEEN VULNERABILITY AND PROACTIVE INTEGRATION

*Proponente: Camillo Regalia (Università Cattolica del Sacro Cuore)*

The social discourse and narrative on young migrants for a long time has been focused on the issue of their vulnerability and the importance of their integration. A basic assumption is that they are vulnerable persons whose main task in order to get a positive personal and social adjustment is to integrate in the receiving society. The recent scientific investigation highlighted the complexity of concepts of vulnerability and integration, showing pitfalls and critical issues in their use both at theoretical and methodological level. It's undeniable that young migrants can be affected by social inequalities and behaviors that obstacle their integration, but at the same time, only limited parts of the literature emphasize young migrants' efforts and strategies to be resilient and to be active agent in the social context. The symposium aim is to present two lines of research: the first one, based on a experimental paradigm, aimed at testing specific intervention in support of the integration of very young migrants; the second one, based on a qualitative approach, aimed at showing how young migrants with different background and personal history of vulnerability can actively shape their life and accomplish important and acknowledged goals in social domain.

## INTEGRATING CHILDREN WITH FOREIGN ORIGINS BY FIGHTING BIAS-BASED BULLYING

*Elisa Bisagno (Dipartimento di Giurisprudenza, Università degli Studi di Modena e Reggio Emilia)*

Bias-based bullying is an obstacle to the integration of children with foreign origins in Italian schools. We conducted two experimental interventions with Italian elementary schoolchildren (N = 463) aimed to foster bystanders' reactions to bias-based bullying against foreign children using the framework provided by intergroup contact. We relied on indirect contact and specifically vicarious contact, consisting in observing positive intergroup relations, operationalized as story reading. In the first study, first- to third-grade children were read ad-hoc created fairy tales on bullying against foreigners. Results showed that the, compared with a no-reading control condition, the intervention was indirectly associated with greater bystanders' reaction and contact intentions via increased intergroup empathy (but not social norms). In the second intervention, 4th-5th grades were read ad-hoc created bullying stories against outgroup (foreigners) vs. ingroup members; we also manipulated norms by asking individuals to negotiate them collectively or to work individually on reinforcing activities. Results revealed that anti-bullying norms mediated the effect of outgroup (vs. ingroup) reading on bystander reaction intentions when norms were negotiated collectively.



## THROUGH THE EYES OF VULNERABILITY: YOUNG MIGRANTS' INTEGRATION PROCESSES IN LUXEMBOURG AND ITALY

*Amalia Gilodi (University of Luxembourg, Luxembourg), Cristina Giuliani (Università Cattolica del Sacro Cuore), Camillo Regalia (Università Cattolica del Sacro Cuore)*

The notion of vulnerability is as popular as it is fuzzy. Its increased prominence in academic literature, policymaking and discourses on migration has led many to treat the concept as a self-evident condition. Some groups of migrants are labelled as vulnerable based on normative innate, situational or structural characteristics, and this label is often used to direct their access to services and aid. However, the notion of vulnerability appears to be conceptually multi-layered, contextually and temporally embedded and dynamically experienced and negotiated. Migrants may find themselves in different conditions of vulnerability, in different places and at different moments of their lives and may experience and process their vulnerability in different ways. Thus, based on data gathered within the EU-funded project MIMY, this study proposes to use vulnerability as an analytical lens through which to examine the integration processes of young non-EU migrants in Luxembourg and Italy. Specifically, the paper proposes to apply a recently developed conceptual model for vulnerability in the context of migration (Gilodi et al. 2022) to analyse the challenges and resources described in focus groups conducted with young migrants and parents of young migrants living in these two countries.

## NARRATIVE RESEARCH ON RESILIENT EXPERIENCE OF MIGRANT YOUTH IN ITALY

*Daniela Marzana (Università Cattolica del Sacro Cuore)*

Using Italian data from the international H2020 project MIMY, this contribution aims to explore the resilient experiences of integration and success through the stories of young male and female migrants who received external recognition in Italy for their work, civic engagement, or a leadership position in organizations. The study adopts a qualitative methodology based on in-depth interviews with young migrants (N=10) living in Italy (18-29 years old) to explore their successful resilient personal experience (in terms of path, challenges, and resources) and their conceptualization of integration. The results show that all the participants report the path with some difficulties, obstacles, and block moments followed by restarts. The principal element found at the individual level is dedication, commitment, and work to achieve a goal. Among the main obstacles to achieving personal success, the participants describe the loss, uncertainty about the future, the associated loss of motivation, and the perceived risk of failing. Among the primary resources are recognized both individual and relational dimensions. Specifically, participants report mainly talent, ambition, determination, self-confidence, and training at the personal level.

## SOCIAL AND PSYCHOLOGICAL CAPITAL IN SOCIAL ENTERPRISES WITH A MIGRATORY BACKGROUND: RE-DEFINING “ADJUSTMENT”

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The research contributes to the scientific–psychological debate on refugees’ social representation by focusing on the factors leading their positive adjustments in local communities. Within a recent process that considers refugees as reliable interlocutors for the improvement of reception policies, these populations are encouraged to start up social enterprises aimed at fostering newcomers’ social integration. This qualitative research studies the interplay between social and psychological capital to describe the internal and relational resources that brought citizens with a migratory background to start up their social enterprises. The research has been carried out within two enterprises that provided two case-studies. A total of 13 participants from from Sub-Saharan Africa, Est-Europe, South America, Middle East were involved. Data were collected through narrative interviews and a questionnaire analyzed through the Social Network Analysis. Results show that while social and psychological capital were independently activated to start from scratch in the resettlement community, they occurred in interrelation when participants transformed their direct experiences related to migration into the human capital of their enterprises.

# COMMUNICATION AND DIGITAL TECHNOLOGIES

## ADOLESCENT INTERNET GAMING DISORDER AND ITS ASSOCIATION WITH PARENTAL BEHAVIOURS: A DYADIC STUDY

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Internet Gaming Disorder (IGD) is a widespread phenomenon. Adolescent IGD is not only influenced by individual characteristics, but also by parent-child relationship. Since the majority of studies has only relied on single reporters (adolescents), little is known about the perceptions of parents and whether these are shared among parent-adolescent dyads. Our research aimed to examine multiple informants' parallel reports of maternal behaviours and adolescent IGD and to disentangle associations between these behaviours that are shared by mother and adolescents from associations that are unique to each. Data were collected using self-administered questionnaires from N= 137 distinguishable mother-adolescent dyads and analysed through a Common Fate Model (CFM). Mothers provided higher estimates of their sons' IGD and reported to behave in a warmer way than that perceived by adolescents. Adolescents perceived higher maternal indifference. CFM indicated divergence in results when associations between maternal behaviours and IGD were partitioned according to shared and unique reporter views. In the context of adolescent IGD and family factors, a multi-informant approach is recommended. Keywords: Internet Gaming Disorder; adolescents; parental behaviours; dyadic data

## COMMUNICATING ONLINE WITH “DISTANT” OTHERS: THE ROLE OF ABSTRACTION ON SNS INTERACTIONS

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We are living in a hyperconnected world. Nowadays, thanks to Social Network Sites (SNSs) tools, we can easily communicate with people thousands of miles away and with someone next door. The relationship between psychological distance and mental representation has been investigated in depth by a growing body of study on construal level theory. Following this theory, those who interact through their SNSs strategically use abstract messages and level construals to regulate their social distance from the others and successfully communicate with distant others. Physical, but above all psychological, distance in relation to electronic communications is the subject of this research. Linguistic abstraction in participants' productions on SNSs was observed across three studies using both a correlational and experimental approach. The results demonstrated that the SNSs shapes the messages. Particularly, consistently with the construal level theory and the linguistic category model, different SNSs lend themselves to different communications according to the level of social distance perceived by the network of their contacts.

## RESOLVING IDENTITY GOAL INCOMPLETENESS ON INSTAGRAM

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Drawing on self-completion theory (Wicklund & Gollwitzer, 1982), our experiment extends previous research on the effects of incompleteness on online behaviors by testing two related hypotheses. First, since identity goal incompleteness is a goal-oriented state, it should induce orienting effects intended to facilitate goal achievement, such as impulsiveness in online posting, uninterest in others' posts, feelings of irritation, and narrowing of attention. Second, all these orienting effects should disappear if the person resolves incompleteness by publishing a self-symbolizing post on Instagram—a post with identity-related symbols (e.g., stethoscope). In a sample of 264 medical students, we induced incompleteness vs. completeness feelings and then gave the possibility to restore completeness or not through a self-symbolizing vs. neutral Instagram post. Finally, we assessed participants' impulsiveness, uninterest in others, irritation, and narrowed attention in solving a visual game. Results supported both the hypotheses. Identity goal incompleteness caused specific orienting effects, and these effects were resolved by self-symbolizing on social media. Implications of our results advance the understanding of social media behaviors and deepen the study of self-completion processes.

## ONLINE INTERVENTIONS AND THERAPEUTIC RELATIONSHIP ONLINE, EXPERIENCES FROM ITALIAN PSYCHOLOGISTS AND PSYCHOTHERAPISTS DURING THE PANDEMIC

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The COVID-19 pandemic posed new challenges to clinical practice. The present study aimed to explore the experiences with online interventions during the pandemic, to identify and understand the implications and critical issues of e-interventions in psychological care. 368 professionals completed an online survey between February and July, 2021. Descriptive analyses were performed with Jamovi and thematic analysis with Atlas.ti9. Results pointed out that 62% of the participants had never used online interventions before; 45.3% reported little confidence with online interventions and 77.1% faced software and hardware disruptions. For the 93.6% of professionals it is very important to feel presence during the online session, fostering emotional attunement, acceptance and active listening. The most important aspects of presence reported by professionals are: construing a third space, re-defining the therapeutic setting and emotional resonance. The pandemic allowed a great thrust forward in online interventions, many aspects needs to be properly addressed to guarantee its use in the future. It is of great importance to investigate strategies to create and maintain a satisfying therapeutic relationship in the online setting, fostering the construction of new ways to be present online.



# GENDER ISSUES

## THE EFFECT OF TEMPORAL COMPARISON AND HOPE ON SYSTEM JUSTIFICATION PROCESSES IN LOW-STATUS GROUPS

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For Social identity approaches to system justification, positive intergroup temporal comparison and hope for ingroup future advancement make disadvantaged groups more likely to perceive that the existing social arrangement is just. We tested the effects of positive vs. negative temporal comparison and hope for future advancement on system justification among low-status groups (women). Preliminarily correlational research with Italian women showed that hope positively correlated with system justification only for strongly identified women. In two experimental studies, with Italian and Spanish women, we manipulated the negative/positive temporal comparison by varying the described temporal stability/instability of the existing gender gap and measured improvement hope, temporal comparison, gender and economic system justifications. In the Italian sample system justifications increased when women hoped for future ingroup advancement which in turn was stronger when the gender gap was described as unstable. Hope mediated the instability effect on system justifications. Also, instability increased hope as far as women performed temporal comparison. The first results support the hypothesis: system justification is motivated by ingroup-related interests. The Spanish study is in progress.

## SOCIAL REPRESENTATIONS OF NON-BINARY GENDER: THE VOICE OF THE LGBTQIA+ COMMUNITY

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In Western societies, gender is mainly considered in a binary way and associated with the sex assigned at birth, following a principle of cisnormativity (Serano, 2016). In recent years, there has been a progressive questioning of cisnormativity. Gender, queer, and trans studies represent a fundamental resource for LGBTQIA+ people and community, sustaining the formation of more inclusive representations and definitions of gender, capable of integrating the complexity of multiple experiences of subjectification (Catalpa et al., 2019). This study examined the social representations, understood as the everyday production and organization of meanings that constitute the symbolic dimension of a set social object (Moscovici, 1989), of non-binary gender in Italy collected from mid-October to mid-November 2021, using the free word association technique, involving 1484 LGBTQIA+ participants living in Italy (Mage=26; SD=7.1). Participants were mainly cis women (43%) and non-binary (37%), polysexual (72%), White/Caucasian (97%), and LGBTQIA+ activists (56%). The content analysis identified fifteen categories, related to the themes of gender spectrum, identity affirmation, and positive and negative feelings. The results from the T-LAB and correlational analyses will be discussed.

## ACTUAL VS. DESIRED. TRANSFORMING THE ITALIAN GENDER AFFIRMING PATH THROUGH THE WORK OF TRANS ACTIVISTS

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Due to medical, psychological, and social aspects, Italian trans, non binary and gender questioning (TNBGQ) subjectivities encounter formidable barriers in their gender affirming path (GAP). The Minority stress model shows how structural obstacles reinforce the marginalization of the TNBGQ population in society. Instead, activism became a strategy to cope and a source of resilience and empowerment. This research aims to explore the experiences of Italian trans activists on the topic of GAPs, offering them a safe(r) space to support their voices. Twenty-five TNBGQ activists were interviewed. Participants were asked to mention their GAP experiences, focus on how GAPs should be structured, and share their actions as activists. Following an ecological approach, the results were organized into a multilevel systemic model. Participants highlighted the rigidity of the actual GAP, calling for a more tailored approach. The study suggests that the Italian institutional GAP system is detached from the trans population's needs. To participants' account, engaging trans subjectivities with a bottom-up approach can represent a turning point in addressing the trans population's medical, psychological, and social needs involved in the GAP.

## (MEN'S) FACES - IN (OBJECTIFYING) CONTEXT: FEMALES' AFFECTIVE, ELECTROPHYSIOLOGICAL AND BEHAVIOURAL RESPONSES TO OBJECTIFYING MEN

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The specific effects of sexual objectification on females' socio-affective dimension are still poorly understood, and on neural activity have never been explored before. In the present study we investigated women's emotional and electrophysiological responses during simulated objectifying social interactions, and we examined consequent punishing behaviours towards the perpetrator in an ultimatum game. Behavioural results showed that during objectifying encounters women generally felt angry and tended to punish the perpetrator in later interactions. Differently, more the women self-objectified more they felt shamed and tended to punish less the perpetrators. Neural results showed that objectifying interactions modulated women's neural signal elicited during the processing of the perpetrator, increasing early (N170) and later (EPN, LPP) ERP components. In addition, the amplitude of LPP was positively correlated with shame emotion and the self-objectification level. This finding provides first evidence of specific time-courses for sexual objectification, self-objectification and its associated shame response, and proves that emotional and social consequences of sexual objectification in women may depend on their tendency to self-objectify

# HEALTH PSYCHOLOGY 1

## ANXIETY IN SPORT: AN ITALIAN VALIDATION OF THE SPORT ANXIETY SCALE 2

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Anxiety can affect different spheres of our lives and several studies found that it has a negative impact on sport performance. Precisely, it can limit body coordination, cardio-vascular efficiency, and cognitive concentration. Anxiety can even be dangerous in some sports such as car racing due to attentional control limitation. The availability of a tool measuring sport anxiety can thus be of help for both research and applied (e.g., intervention) aspects. The aim of the present contribution was to validate an Italian version of the Sport Anxiety Scale 2 (SAS-2), assessing the competitive trait anxiety experienced by athletes before or during competition. In total, 149 participants (35.6 % females) aged between 18 and 64 ( $M = 32.12$ ,  $SD = 10.99$ ) completed five questionnaires measuring sport anxiety, trait and state anxiety, depression, and social phobia. Our results supported the three-factors structure of the SAS-2 (somatic anxiety, worry, and concentration disruption, all with acceptable internal-consistency), and showed that SAS-2 scores correlated with the other questionnaires thus suggesting good validity. Practical applications of the findings, limitations and suggestions for future research were also discussed.

## “THE NEED TO DO SOMETHING”: THE EXPERIENCE OF RESIDENT PHYSICIANS IN A TELEMEDICINE SURVEILLANCE SERVICE DURING COVID 19 PANDEMIC

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The Operations Center for Discharged Patients (COD19) was an active telemedicine surveillance service for COVID home-care patients which involved about 180 resident physicians from the University of Milan in monitoring critical clinical conditions and recognizing social and health issues. The service was based on a call center that was active 16 h a day / 7 days a week from March 2020 to April 2022. The speech will present the results of in-depth interviews with 11 resident physicians, from different medical specialties, who were involved in the tele-monitoring service from the first COVID wave. Thematic analysis identified three transversal patterns: the double-sided “need to do something” initial motivation, the development of new reflexivity on their role as physicians, the support of the colleagues group and the role of the supervisor in coping with clinical and relational criticalities during phone interactions. Differences in the interactional features of phone conversations during different waves will be discussed.



## PROTECTIVE AND RISK FACTORS FOR EMERGENCY STRESS AND BURNOUT IN ITALIAN HEALTHCARE AND EMERGENCY RESPONSE WORKERS DURING THE COVID-19 PANDEMIC WAVES

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Coping with a severe and growth emergency situation as COVID-19 pandemic led to increase level of stress and burnout in healthcare and emergency workers. The present study examines stress and burnout in healthcare and emergency workers during Italian COVID pandemic and explore the role of psychological hardiness and positive coping strategies as protective factors. An online survey was administered to Italian healthcare workers (N=220), emergency responders (N=121) and volunteer Italian Red Cross (N=328) to measure hardiness (Hardiness Resilience Gauge), coping strategies (Coping Self-Efficacy Scale—Short Form), Perceived stress (Perceived Stress Scale), Emergency Stress (Emergency stress questionnaire), and burnout (Maslach Burnout Inventory). Results showed that the volunteers had the lowest levels of burnout and the highest levels of hardiness and positive coping levels, while healthcare workers had the highest levels of emergency stress and burnout. Hardiness emerged as a moderator of the effects of emergency stress on components of burnout, while problem focused coping and stopping negative thoughts- emotions also showed moderating effects. Results suggest that is important to employ training in hardiness and positive coping skills for healthcare and emergency workers.

## DESCRIPTION AND APPLICATION OF A CODING SYSTEM FOR DOCTOR-PATIENT COMMUNICATION IN ONCOLOGICAL CONSULTATIONS (ONCODE)

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In cancer care, patient-centered communication has become a key feature due to its influence on patients' well-being, adjustment to diagnosis, better adherence to health recommendations, and higher quality of life. However, in intercultural communication, a growing body of evidence has shown that patients' ethnic, linguistic, and cultural identity in medical encounters can influence communicative practices defining adverse outcomes for the patient, such as lower treatment satisfaction, lower trust in the doctor, and lower adherence to the doctor's recommendations. As other interaction analysis systems, ONCode allows for observing, identifying, categorizing, and quantifying the salient characteristics of doctor-patient communication. Furthermore, ONCode is an emic-oriented system for coding doctor-patient communication in a specific setting (oncological consultations) that captures patient-centered communication practices, with particular attention to ethnically discordant interactions. After describing the properties and conceptual background of the system, examples of coding of video-recorded oncological consultations will be discussed.

## DOES THE ANGELINA JOLIE EFFECT ALSO EXIST FOR MEN? THE USE OF INSTAGRAM AND APPEARANCE COMPARISON AS PREDICTORS OF ACCEPTANCE OF COSMETIC SURGERY AMONG YOUNG ITALIAN MEN

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Instagram plays an important role on men's body image, favoring social comparison and the tendency to use strategies for managing one's appearance (Gültzow et al., 2020). While research shows that Instagram use is associated with greater acceptance of cosmetic surgery for women, studies are scarce for men. This study investigated the role of both Instagram-activities (carried out about oneself, friends, and celebrities) and Instagram-appearance comparison (frequency and direction) on consideration of cosmetic surgery and its acceptance for intrapersonal and social reasons. Participants were 470 men ( $26 \pm 3.72$ ). Hierarchical regressions were performed. Findings showed that both activities carried out about celebrities' images and frequency of appearance comparison on Instagram predicted consideration of cosmetic surgery and its acceptance for social reasons; its interest for intrapersonal reasons was predicted by direction of comparison only. Findings provide information about the role that Instagram play on acceptance of surgery for aesthetic reasons and suggest the importance to design preventive interventions about it. Reducing Instagram celebrities' activities and appearance comparison is beneficial for decreasing the acceptance of unnecessary cosmetic procedures among men.

# **POLITICAL PSYCHOLOGY 1**

## CONSPIRACY BELIEFS FUEL POLITICAL VIOLENCE: A MODERATED MEDIATION MODEL

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Conspiracy Beliefs-CB provide clarity in response to world uncertainty. Although largely promoted by individual dispositions such as paranoid suspiciousness, their effect on non-normative political participation-NNPP (violent protests, riots, and terrorism) can be better understood within the 3N model (Kruglanski et al., 2009, 2013, 2020), according to which social psychological factors such as motivation (need for personal significance), normative influence (social network), and ideology (narrative) lead to radicalization. This correlational study tests the relationship between CB (e.g. believing that the world economy is controlled by a secret elite) and support for political violence within an extended version of 3N model that includes the need for cognitive closure-NFC. In a U.S. participants sample (N=535) a moderated mediation model showed that national collective narcissism-CN (the quest for one's ingroup external recognition and a group level of need for significance), motivates a high agreement with CB under average and high levels of NFC. In turn, the higher the agreement with CB, the higher the support for NNPP only in average and high levels of network ideological support for conspiracies, even when controlling for the individual trait of paranoid suspiciousness.

## UNPACKING POPULIST ATTITUDES THROUGH EPISTEMIC NEEDS AND PERSONAL VALUES: A STUDY ON ITALIAN VOTERS

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This study examined the relational pathway between epistemic needs, personal values, and populism to shed light on the motivational dynamics underlying the adoption of populist attitudes. Drawing on Jost's perspective on the role of ambiguity management needs and ideological conservatism in shaping political attitudes, this study also highlights the links between populist attitudes and the left-right political continuum. A total of 785 Italian adults ( $F = 56.6\%$ ; mean age = 35.8 years,  $SD = 14.1$ ) anonymously participated in the study by completing an online questionnaire. Path analysis revealed a direct contribution of self-deception to populist attitudes, whereas intolerance of ambiguity contributed to populist attitudes after the individual's value system was aligned with ideological conservatism. The findings emphasized the greater importance of personal values over political values in driving political attitudes and suggested that a fusion of left- and right-wing populism may occur based on shared authoritarian predispositions. Developing curricula that reinforce the soft skills of lateral and critical thinking could be significant to counter the authoritarian basis of populism by encouraging System 2-based thinking and reducing reliance on heuristic thinking.

## ACCEPTING REPRESSION IN TIMES OF COVID-19: THE EFFECTS OF AUTHORITARIANISM AND VALUES

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The outbreak of the COVID-19 pandemic led most of the countries involved to take measures to contain the spread of the virus. Among these, the authorities banned assemblies of more than a few people and tough measures were sometimes adopted to disperse people breaking this rule. The aim of this research is to investigate whether people in times of pandemic were more likely to accept such measures as necessary with a view to stopping these gatherings. Specifically, in line with the democratic delusion paradox, we expected that such measures would be considered more acceptable if implemented by democratic states, as compared with countries perceived to be authoritarian. Results on 359 Italian participants support the so-called democratic delusion paradox. Participants were indeed less ready to condemn the harshness of the measures when the actions took place in Sweden as compared with Russia. Moreover, as hypothesized, this paradox is supported more by people with a low value orientation, while people with a high value orientation do not accept the measures in either setting.

## POPULIST IDEOLOGY, IDEOLOGICAL ATTITUDES, AND ANTI-IMMIGRATION ATTITUDES AS AN INTEGRATED SYSTEM OF BELIEFS

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A considerable challenge for the identification of the core components of a beliefs system is examining these components' position within the overall structure of said system. By modeling beliefs as a network of interconnected attitudes and facets, this research investigated the centrality of adherence to populist ideology and classical ideological attitudes in relation to negative feelings towards immigrants and voting behavior. We examined data from a sample of 774 Italian adults with two distinct Network Analysis models. We found the dimensions of people sovereignty and anti-elitism playing a pivotal role in the structure of populist ideology. We also highlighted the key role played by the ideological attitudes of right-wing authoritarianism and social dominance orientation within the broader beliefs system including voting, populist attitude-dimensions, and anti-immigration stances.



## CONFUSED, THREATENED, AND ISOLATED: CONSPIRACY BELIEFS IN THE PANDEMIC ERA

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Even if conspiracy theories are diverse in their content, previous research highlighted that believing in them is rooted in common psychological processes. In particular, the conceptualization of conspiracy beliefs as a response to unsatisfied psychological needs is becoming an emerging framework. Previous evidence focused on linking several proxy variables of psychological needs to conspiracy beliefs, while it is unclear whether conspiracy beliefs are used when specific psychological needs are frustrated. In this study (N = 1440), we built a scale aimed in measured participants' psychological needs, how they try to satisfy their needs, and the satisfaction of their psychological needs. Results from the exploratory data analysis suggest a 4-factors structure for the subscale of psychological needs, and a 4-factors structure for the subscale of psychological needs satisfaction. Conspiracy beliefs are associated with lower epistemic and social needs satisfaction, whereas satisfaction of existential needs was not associated with conspiracy beliefs. Needs satisfaction was associated with mainstream information source use, which is associated with lower conspiracy beliefs. Implications for the compliance with medical guidelines are discussed.

# ENVIRONMENTAL PSYCHOLOGY 1

## ENVIRONMENTAL ENGAGEMENT: HOW EARLY EXPERIENCES AND ACTIVITIES IN NATURE INFLUENCE PRO-ENVIRONMENTAL MOTIVATION

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Extensive research emphasised the positive effects of early exposure to natural settings through informal and formal activities. While the first ones involve recreational activities such as playing and hiking, the latter include school-related experiences. Those occasions play an essential role in setting up future environmental consciousness and related motivation to act for nature, especially when accompanied by significant others (e.g., parents, peers, teachers). The present contribution aims to understand what kind of early experiences and activities (e.g., formal/informal; structured/unstructured) enhance environmental commitment in adulthood. We used a retrospective approach based on qualitative analyses of life-history interviews collected within the BIOMOT EC-FP7 on a sample of biodiversity stakeholders. Variables are mapped along three life periods (i.e., 0-15, 15-25, 25 years old until the time of interviews), considered within each semi-structured interview. We aim to discuss this developmental trajectory by considering four levels of analysis: contextual, social, pragmatic, and psychological. Results are expected to highlight that early experiences in nature correlate with a deep awareness of environmental issues and a resulting willingness to act for its safeguard.

## THE USE OF QUALITATIVE PORTRAITS TO INVESTIGATE THE RELATIONSHIP WITH THE STATE BORDER: THE CASE OF TWO YOUNG WOMEN FROM STRASBOURG

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The aim of the present contribution is to highlight the potential of qualitative methods in studying the psychosocial relationship between individuals and geographical objects. We will present two portraits (Lahire, 2002) in order to investigate the relationship with the franco-german state border of two young inhabitants of Strasbourg. These two participants were interviewed several times each, and are part of a research sample of 64 inhabitants. The larger corpus helps to contextualize and place the two presented cases within a general “cartography” of the relationship to the border. Therefore, the presented portraits would be an in-depth analysis. Both participants share a similar geographical trajectory (both coming from a city close to the border and to Strasbourg), and similar spatial practices of the German territory. We will show that the portraits allow studying the discursive relationship to the border and to cross-reference it with the practices of the interviewees. This will be done by analyzing both the socializing frameworks (Lahire, 2002) and the memorial anchoring processes (Haas, 2004, Halbwachs 2001). In this sense, the portraits will be contextualized by the analysis of the social trajectories (cf. Bourdieu, 2001) of the two participants, which differ greatly.

## THE SOCIAL ISSUES IN THE RELATIONSHIP WITH SPACE: COMBINING THE STUDY OF MEANING AND SPATIAL ORGANIZATION OF COGNITIVE MAPS

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Cognitive maps are used in psychology to study representations of space. However, their theoretical and practical use depends on the epistemological point of view adopted by the researcher. We argue that cognitive representations of geographical space are comparable to metaphors (Kitchin 1994), in contrast to a neo-behaviorist approach that considers them like a map stored in individuals' memory. We present results from two studies, combining the analysis of spatial meaning and spatial organization of the cognitive maps. The former explores the ways of attributing meanings to geographical elements changes over time and focuses on their impact on the topological arrangement in cognitive maps of Paris. The latter explains the position of the state border in cognitive maps of Strasbourg both analyzing its place in the spatial arrangement of the map and its associated meanings. These results suggest that cognitive maps depend both on the context of production and on their authors' sociogeographical trajectories. Cognitive maps address practical issues (ex: spatial orientation), communication issues (ex: giving a context to an event) but they also deal with social issues: they are the product of positioning (the self, the others, etc.) in both the social and geographical space.

## TEACHING SUSTAINABLE DEVELOPMENT GOALS: A STUDY ON EMOTIONS AND SUSTAINABILITY ATTITUDES OF EUROPEAN TEACHERS

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In line with international policies promoting the achievement of Sustainable Development Goals, European schools applied many Global Education (GE) programs, a holistic approach to teaching which can favor environmental and social sustainability. While being a popular framework, there is a heated debate about its pros and cons compared to alternative perspectives like Environmental Education and Education for Sustainable Development. Most of the literature focuses on educational principles, but there is a scarcity of empirical studies on the impact of GE approach, especially among teachers. Our study addresses this research gap analyzing the psychological impact of an extensive GE project involving 1303 teachers from 10 European countries. Relevant changes in teachers' emotional states and attitudes towards sustainability and migrations were analyzed through a pre-post experimental design. Results showed that the GE activities had wide positive effects on teachers, reducing their negative emotions during teaching, increasing their attitudes about sustainability, and mitigating negative attitudes towards migrants. No significant impacts on positive emotions were detected. Educational and methodological implications of the applied psychological assessment are finally discussed.

## WHAT ABOUT SUSTAINABLE CHOICES? PROSOCIALITY AND SUSTAINABILITY RISK-TAKING

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Defining a sustainable society means considering simultaneously the present and future issues of social well-being, economic opportunity and the environmental limits imposed by supporting ecosystems. This complexity requires governments and individuals to take risks due to the uncertainty of the dynamic evolution of the current socio-economic context. Despite several studies have highlighted the existence of a link between prosocial behaviors and sustainable behaviors, only a few have focused on the relationship between positive risky behaviors and sustainable behaviors. Risk intelligence is defined as the capacity to effectively assess the pros and cons of a decision in situations in which not all outcomes are expected. The aim of the study is to investigate the relationships between personality, risk intelligence, prosociality, and sustainable risky behavior. The research was conducted on a sample of about 200 participants aged 18 and over through the administration of an online survey. The survey consists of the following scales: Big Five inventory, Subjective Risk Intelligence Scale, Prosociality Scale and an ad hoc created scale to measure risks related to engaging in sustainable behavior. Preliminary results show significant relationships between the dimensions considered.

# **FAMILY AND INTERPERSONAL RELATIONSHIPS**



## SHARING IMPORTANT LIFE GOALS WITHIN ROMANTIC COUPLES: RELATIONSHIP SATISFACTION AS A MEASURE OF AGREEMENT BETWEEN PARTNERS

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Recent studies of romantic relationships highlight that the degree of agreement between partners with respect to important life goals (e.g., having a successful career; becoming parents) critically depend on specific dynamic relationship features. Drawing on this perspective, we hypothesized a correspondence between the desire for offspring of one member of the couple and parenting desire of the other member (as well as her/his attitude toward the family vs. career plans), but only when relational satisfaction was high. To test the hypothesis, we enrolled 220 participants in a cross-sectional design. As predicted, a moderated multiple regression model showed that relational satisfaction significantly altered the effect of parenting desire of one member on parenting desire of the other member of the couple, as well as her/his attitude towards family vs. career plans. Specifically, when relational satisfaction was high, increasing levels of parenting desire in one member predicted higher levels of parenting desire in the other, and lower conflict with career ambitions. We suggest that the perceived quality of the relationship may therefore act as an index of agreement between partners when weighing life goals. Further theoretical and practical implications will be discussed.

## SURROGACY AND ADOPTION: DIFFERENT PARENTING SCENARIOS AND SELF-HUMANIZATION

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In the last decades, more frequently, individuals chose to become parents in ways that differ from natural conception, not only through adoption, but also via assisted reproductive technologies. There is a gap in the literature about how to perceive one's own self when thinking about being a parent through different paths to parenthood. This study explored whether and to what extent different parenting scenarios (being an adoptive mother, being a mother who gives her baby up for adoption, being a surrogate mother, and being an intended mother) were perceiving as self-humanizing (i.e., the self-attributions of human traits to the self) both in terms of human uniqueness (i.e., features that distinguish humans from animals, such as morality) and human nature (i.e., features that are central but not unique to humans, such as relational skills). Our sample consisted of 404 women aged between 18 and 49 years who participated in an online survey. Results showed that participants expect being an adoptive mother to be more self-humanizing compared to being a surrogate mother. Data were also analyzed taking into account participants' age, having or not having a partner, having or not having children, and level of education. Findings will be discussed according to practical implications.

## “WHAT MATTERS TO US”: AN ADAPTATION OF THE PORTRAIT VALUES QUESTIONNAIRE TO MEASURE COUPLE VALUES

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Values are a topic of great interest in several areas of psychology, and they have been predominantly conceptualized and operationalized as an individual, organizational or cultural construct. To date there is a lack of studies that have analyzed values as qualities of proximal microsystems, such as the intimate couple and the family. The couple is an entity, with a unique identity that cannot be reduced to the sum of the two individuals it comprises. Considering partners' perceptions of being part of a couple system characterized by specific value priorities paved the way to the conceptualization of couple values. This contribution analyzes relevant psychometric properties of the Portrait Couple Values Questionnaire (PCVQ), adapted from the 21-item Portrait Values Questionnaire originally aimed at measuring personal values. Five hundred and forty-six Italian respondents (54.1% women; Mage: 41.52 years, SD=7.19) filled in an online anonymous self-report questionnaire. Results of the Multidimensional Scaling and of the CFA Magnifying Glass Strategy confirmed the existence of the four value dimensions of conservation, openness to change, self-enhancement and self-transcendence when measuring couple values. Theoretical and practical implications will be discussed.

## LOOKING FOR POSITIVE EXAMPLES: THE INFLUENCE OF PARENTS' JOB IDENTITY ON ADOLESCENTS' EDUCATIONAL IDENTITY

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Parents can deeply influence their adolescent children by communicating who they are and acting as modeling agents. In line with this, a growing body of literature has shown that intergenerational transmission processes occur in the family context, as shown for instance for transmission of self-concept clarity (Crocetti et al., 2016), cultural orientations and attitudes (Meeusen, 2014), and conflict resolution styles (Van Doorn et al., 2007). In this study, we took a step forward to unravel whether mothers' and fathers' job identity is related to the educational identity of their adolescent children. Participants were 1154 adolescents (Mage=15.74 years, 51.6% females) and their parents (NMothers= 662, NFathers= 492), involved in the ongoing longitudinal study IDENTITIES. Educational and work identity processes have been reported respectively by adolescents and their parents by filling the Utrecht-Management of Identity Commitments Scale (U-MICS; Crocetti et al., 2008). The findings highlighted that the job commitment of the parents (especially the fathers) was positively related to the educational commitment of the children, suggesting that the more parents have consolidated their sense of identity the more they can represent a positive example for their children.

# THE COVID-19 PANDEMIC AND WELLBEING

## FROM ECONOMIC STRESS TO WOMEN'S PSYCHOLOGICAL WELL-BEING DURING THE COVID-19 PANDEMIC: DOES MARITAL SATISFACTION MODERATE OR MEDIATE THIS ASSOCIATION?

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The study of the impact of families' economic hardship due to COVID-19 on the psychological well-being, by considering perceived stress and the quality of couple relationships is an area worthy of exploration. The study explored these associations by hypothesizing that marital satisfaction (DAS) could moderate or mediate the associations between economic stress, perceived stress (PSS), and psychological well-being (PGW-BI). We investigated two distinct models. In the first one, we supposed that economic stress (X) could be associated with psychological well-being (Y) through the mediation of perceived stress (M1). We supposed that the mediation could be moderated by marital satisfaction. In the second model, we hypothesized that economic stress (X) could impact the psychological well-being (Y) through the mediation of perceived stress (M1) and marital satisfaction (M2). Participants were 385 women and 38.4% of them said that the Covid19 significantly impacted their family income. Results showed that marital satisfaction did not moderate the associations investigated. Conversely, data showed that economic stress (X) predicted lower psychological well-being through the mediation of perceived stress (M1), which, in turn, predicted high levels of marital dissatisfaction (M2).

## THE EFFECT OF THE COVID-19 PANDEMIC ON UNIVERSITY STUDENTS' WELL-BEING: A STUDY ON THE TREND OVER THE PAST THREE YEARS

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The COVID-19 pandemic has had and continues to have a significant impact on the well-being of people, in multiple domains (interpersonal, community, occupational, physical, psychological and economic). Furthermore, some categories, such as university students, have suffered greater consequences than others. The aim of this research was to evaluate the trend of the university students' well-being, during these last years of pandemic emergency. Three groups consisting of 293, 344 and 128 students, homogeneous with respect to sex, age, sexual orientation and housing status, were collected. The study consisted of three data collections, that took place in three different years: in 2020 (during the first lockdown established in Italy), 2021 and 2022. The I COPPE scale was used as a measuring tool: it allows to obtain an ecological, multidimensional and temporal assessment of people's well-being. The data were collected through snowball sampling, using an online self-report questionnaire. The results showed that students' well-being has fluctuated in recent years, with very low levels in 2021 and an upward trend in 2022. Application implications of the results will be widely discussed.

## INSIDE AND OUTSIDE: PERCEPTIONS OF DOMESTIC AND EXTRA-DOMESTIC ENVIRONMENTS DURING THE COVID-19 PANDEMIC

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The home, as a physical location and psychological concept, represents a clear and immediate boundary between social and private life, in such a strong way that is almost comparable to the concept of self. The COVID-19 pandemic has led to changes in daily life, both in domestic and extra-domestic domains, modifying and questioning the boundaries between these contexts and their mutual perceptions. Given the importance of such perceptions in structuring reality, the aim of the present study is to assess perceptions of domestic and extra-domestic environments, and investigate how these perceptions are related to sociodemographic, individual, family, and social psychological factors. Data, collected through an online questionnaire in July 2020 on 2191 Italian individuals, were first analyzed through a cluster analysis. Four distinctive profiles emerged (positive inside and outside; negative inside and outside; moderate inside and outside; positive-inside negative-outside), which were different also in terms of sociodemographic, individual, family, and social variables, thereby indicating key resources and vulnerabilities of meaningful subgroups of individuals to target in interventions.



## LONG-TERM CONSEQUENCES OF THE PANDEMIC RESTRICTIONS: EFFECTS OF SOCIAL DISTANCING ON QUALITY OF LIFE

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The last two years have been characterized by social restrictions, significantly impacting the personal well-being of the Italian people. This study is focused on the intention to maintain social distancing despite the easing of the restrictions. The aim is exploring the relationship between positive and negative affect, balanced time perspective, positive (life satisfaction and flourishing) and negative outcomes (the intention to maintain social distancing) on Italian adults during the post-lockdown period. The participants are 285 Italian adults. The survey is composed of: PANAS, Balanced Time Perspective Scale, COVID-19 Exhaustion Scale, Flourishing Scale, Temporal Satisfaction With Life Scale, Satisfaction With Life Scale, Intention to Maintain Social Distancing Scale. Data analysis will explore the relationships between the dimensions analysed, verifying the mediational role of the Covid exhaustion: in the relationships between positive and negative affect and the intention to maintain social distancing; in the relationships between balanced time perspective and the intention to maintain social distancing; the effects on subjective wellbeing (life satisfaction and flourishing). Implications for psychological interventions and future research will be discussed.

# THE PSYCHOLOGY OF ATTITUDES

## PERCEPTIONS OF POST-MORTEM ORGAN DONATION AND WILL EXPRESSION, A FOCUS GROUP STUDY

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Many factors can influence the decision about post-mortem organ donation such as personal and cultural beliefs, information, and will registering procedures. The present study aimed to explore perceptions, beliefs and information around post-mortem donation and will expression to orient future interventions and raise awareness. A total of 38 focus groups were conducted in 6 Italian regions between June and November 2021 involving 346 participants from the general population, healthcare professionals and registry officers. A qualitative thematic analysis was conducted with Atlas.ti9. Results pointed out different themes such as: personal beliefs, complexity of choice, obstacles and facilitators to donation, fear of death, body sacredness, difficulties in accessing correct information, dissatisfaction with will expression procedures and generational differences. Differences between groups highlighted the complexity of will expression and the need for social role models and effective informational campaigns to raise awareness. These results pointed out the significance of a bottom-up perspective to catch the personal perceptions and beliefs around donation, underlining the urgency of creating tailored interventions to sensitize different groups of population.

## REPUTATION AND EMOTION: HOW THE MIND DRIVES OUR FOOD PREFERENCES AND CHOICES

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The study analyzed a regression model investigating the impact of “food reputation” on “willingness to eat” (WTE) through the sequential mediation of “food emotions” (positive and negative) and “food preference” in participants’ preferred (pizza) and dispreferred (offal) foods. Analyses revealed that “food reputation” generally has a positive and significant indirect effect (through the mediation of “food emotions” and “food preference”) on the “WTE” in both preferred and dispreferred foods. It also emerged a positive mediation effect of “positive food emotions” in predicting the “WTE” preferred and dispreferred food. “Negative food emotions” have a negative mediation effect in predicting the “WTE” dispreferred food. Results showed that positive and negative food emotions have a greater impact on “WTE” for the dispreferred food than for the preferred one. Results highlight how emotions related to a particular food significantly influence the willingness to eat it. However, a clear predominance of cognitive factors (food reputation) over emotional ones in predicting the “WTE” of preferred and dispreferred foods was also found. This predominance is confirmed by the latest hypothesis, which shows that foods with a worse reputation are also those that are more influenced by emotions.

## WAITING FOR THE COVID-19 VACCINE: VACCINE INTENTION, TRUST IN AUTHORITIES AND INFORMATION NEEDS

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To advance our knowledge of vaccine intention mechanisms, plan effective vaccination strategies, and better direct communication efforts, this study explored whether and to what extent the perception of severity and susceptibility to the infection, trust in authorities, and demographics shaped people's COVID-19 vaccine intention during the first COVID-19 wave. In a cross-sectional study, 1373 Italian participants completed an online survey measuring demographic features, perception of the disease severity, disease risk perception, COVID-19-related worry, vaccination intention, and level of trust in authorities and news media. Higher COVID-19 vaccination intention was associated with having a regular history of seasonal flu vaccine, a greater COVID-related worry, a higher perception of disease severity, and a higher trust in the Government. These findings further our understanding of vaccine intention in a pandemic scenario where a vaccine is still hypothetical and provide valuable information on the public's representation of the infection and precious insight into people's future acceptance of a vaccine to inform the development of communication interventions aiming to maximize adherence to vaccination programmes and to modify disease-related dysfunctional representations.

## DETERMINANTS AND CONSEQUENCES OF GULLIBILITY

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This study aimed to analyze the relationship between gullibility (composed of the factors persuadability and insensitivity to signals of unreliability) and health locus of control, religious orientation, paranormal health beliefs, perceived vulnerability to disease, fear of COVID-19, and beliefs in fake news about COVID-19. In addition, it was intended to test whether gullibility was a mediator between the first variables considered and beliefs about fake news about COVID-19. A questionnaire containing measures of the investigated constructs was administered to 287 Italians. Results show that people susceptible to persuasion exhibit a God-related locus of control, an extrinsic religious orientation, and are not afraid of germs. While those who do not recognize signs of unreliability tend to perceive greater infectiousness to diseases. Furthermore, the results showed that only persuasiveness mediates the relationship between locus of control, pseudoscientific beliefs, religious orientation, fear of COVID-19, and germ aversion and fake news.

## RADICALS VS MODERATES: A COMPARISON OF SOCIAL NETWORKS

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Having connections to violent friends has been associated with several forms of ideological violence (e.g., Sageman, 2004; Webber, et al., 2018). Moreover, the literature surrounding extreme groups suggests that radicals are highly significance seeking (Kruglanski et al., 2021), fused with the group (Gomez et al., 2022), and normatively tight (Gelfand et al., 2013). However, studies that draw these conclusions from a direct comparison of moderate vs. radical groups are scarce. To contribute to fulfilling this gap, we recruited Muslims from two religious organizations in Indonesia that espoused different perspectives on Islam pertaining to ideological extremism (i.e., establishing a caliphate), and violent extremism (i.e., violent jihad). Moderates (N = 216) were drawn from the membership of Nahdlatul Ulama. More extreme individuals (N = 211) were drawn from Jemaah Islamiyah. Differences between the two groups in need for significance, group fusion, tightness, and support for violence, as well as the willingness to sacrifice for Islam, are discussed. At the group level, results related to the network's support for and engagement in violence, as well as the relationship with the network (i.e., level of interaction, closeness, need for approval) are also discussed.

# COMMUNITY PSYCHOLOGY



## COMMUNITY PSYCHOLOGY FOR THE EMPOWERMENT OF GOVERNANCE NETWORKS ENGAGED IN TAKING CARE OF THIRD-COUNTRY NATIONALS. THE YALLA! PROJECT SOCIAL COMMUNITY SERVICES: RESEARCH

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The presence of migrants in Italian cities is very heterogeneous, with intertwining old and new flows and a regular increase of asylum seekers and holders of international protection. It poses new challenges from a social, cultural, political and organizational point of view. In order to improve the governance networks of services for migrants, as part of the “Yalla!” project, the DSU of the University of Naples Federico II carried out a quasi-quantitative research in 2 phases. The quantitative phase aimed to map resources, obstacles and perspectives: 291 questionnaires were administered to local operators and 247 to teachers. The qualitative phase aimed to activate a dialogue with organizations and institutions: 6 Thematic Focus Groups were carried out with 66 operators, recruited through a snowball sampling. Quantitative data were collected using an online self-report questionnaire; for qualitative data a Thematic Analysis was carried out. Results showed that language is the greatest difficulty, in social and educational contexts. There is a strong fragmentation among services and a lack of synergistic work between public and private, with interventions reported as not being timely. Co-planning proposals were shared between organizations involved and beneficiaries.

## SUPPORT FOR THE RE-FUNCTIONALIZATION OF INTERINSTITUTIONAL NETWORKS FOR TAKING CHARGE OF MIGRANTS: THE YALLA! SOCIAL COMMUNITY SERVICES

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The services for migrants in Italy are fragmented and disconnected. It become worrying in cities, like Naples, where there are areas with high incidence of migrants and social vulnerability. The Zone Plan (PdZ) represents the programmatic and operational tool of the territorial social and health services; a resource for meeting and co-planning. In order to improve the integration of services offered to migrants by supporting their re-functionalization and the reformulation of the Social Zone Plan of Naples, for a new dialogue among the various sectors, 30 online Focus Groups were carried out to referents of the health, educational, associative and institutional areas of the 10 municipalities of Naples, within the Yalla! Project. The data were used to write 12 thematic position papers and community profiles, shared with the network of Neapolitan services dedicated to migrants. The sampling was snowball. The results show that the main problems concern the lack of adequate skills and resources, starting with those relating to linguistic-cultural mediation, the lack of adequate governance shared by the institutional and civil society subjects involved, and insufficient coordination at the district and sub-district levels. These data will support the Naples Area Plan 2020-2023.

## IT IS EASY TO SAY “QUALITATIVE”: OLD AND NEW EPISTEMOLOGICAL, THEORETICAL AND TECHNICAL QUESTIONS

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Traditionally, qualitative data analysis is thought of as procedures linked to an “old fashioned” form of data processing (“paper and pencil”) or to some (often simplified and trivialized) versions of Grounded theory. In many cases, the description of the data is biased by underlying misunderstandings and methodological errors that lead to erroneous (unwanted, misleading) interpretations of what qualitative analyzes are/are not. For many years, I have set myself the goal of understanding what the essence of qualitative analyzes is, how to give them the right dignity, how to enhance their data and the participants who are their source. I propose to reflect on data sources, beyond the classic focus groups and interviews, also on the data gathered through new technologies. We will then proceed to explore the methods of reasoning suitable for drawing conclusions (inductive, deductive, abductive thinking) to demonstrate how fallacious the dichotomy “deduction = quantitative” and “induction = qualitative” is. Finally, it will be possible to think about the methods of data processing in the light of recent models, such as constructionist grounded theory and thematic analysis. The discussion will be expanded with through research examples and recent publications.

## YOUTH SOCIAL JUSTICE ENGAGEMENT FOR MIGRANTS

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The Social Justice Youth Development framework (SJYD) considers young people's engagement and development as three levels of Self, Community, and Global awareness (Iwasaki, 2016), leading to critically understanding and being engaged in society (Ginwright & Cammarota, 2002). Being involved in a social justice movement means acting individually and collectively and mobilizing people and resources to struggle for human rights and reduce social inequalities and oppressions (Guerrero, 2021). Our study aimed at understanding the experience of young people's engagement in youth organizations dealing with migrants' issues and the perceived inequalities directly or indirectly lived. We explored their awareness of their role as active citizens and their sense of community at the local and global levels. Thirteen organizations located in Bologna were selected to conduct semi-structured interviews. Twenty organization members were interviewed (6 M, 14 F; Mean age=27.8 years old). The Thematic Analysis addressed motivations, opportunities, barriers, and values for engaging in social justice organizations. Results showed that organizations' members have different self and community awareness levels towards actions for migrants' rights and broader social and political actions.

## COVID-19 IN OUR LIVES: SENSE OF COMMUNITY, SENSE OF COMMUNITY RESPONSIBILITY, AND REFLEXIVITY IN PRESENT CONCERNS AND PERCEPTION OF THE FUTURE

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The pandemic has caused disruption in the daily routine of citizens with unpredictable psychosocial changes. The aim of this study is to examine the relationship between citizens' perceptions of the effectiveness of the institutional response, their connectedness to and responsibility for their community (Sense of Community-SoC; Sense of Community Responsibility-SoC-R), and their personal and social concerns about the current emergency and their perceptions of the future. Another variable considered was personal reflexivity about the pandemic. 3925 Italian adults completed an online questionnaire during the first COVID -19 lockdown. A structural equation model with mediation was tested. Institutional effectiveness was associated with SoC, SoC-R, current social concerns, and future perceptions. SoC and SoC-R were associated with current personal and social concerns and future perceptions. Reflexivity was negatively associated with SoC and positively associated with SoC-R, mediating the relationships between SoC, SoC-R, and current personal and social concerns and future perceptions. Results suggest that a perspective that considers individual and sociopolitical levels and their interaction must be adopted to better understand the impact of the pandemic during a national lockdown.

# INTERGROUP RELATIONS 1

## CAN WE CHANGE HIGH NEED FOR COGNITIVE CLOSURE ADOLESCENTS' PREJUDICE TOWARDS MIGRANTS? THE ROLE OF CLASS SHARED COGNITIONS AND IN-DEPTH EXPLORATION OF EDUCATIONAL IDENTITY

*Flavia Albarello (Sapienza Università di Roma)*

High NCC individuals are more prejudiced and prefer cognitive stability over change. Can we change this tendency in young people? We focused on school-related aspects as sources of influence over individual attitudes through class shared cognitions (in terms of a homogenous perception of the outgroup relying on simple categorization) and on identity formation processes that are intertwined with social identity ones, such as in-depth exploration of educational identity alternatives (relying on accurate thinking). A longitudinal study on 304 adolescents was conducted to test whether the NCC effect on prejudice towards migrants was mediated by in-depth exploration of educational identity alternatives. Due to high NCC individuals' preference for stability, this effect would be pronounced for those highly exposed to the shared cognition of migrants as a homogenous group. Results of a bootstrapping moderated mediation revealed that for individuals highly exposed to class shared cognition of migrants as a homogenous group, in-depth exploration mediated the effects of NCC leading to lower prejudice towards migrants. Results are discussed stressing the role of contextual factors on NCC and the interplay between personal and social identity processes underlying adolescents prejudice

## PARENTING AND THE TRANSMISSION OF VALUES IN IMMIGRANT MUSLIM FAMILIES

*Anna Miglietta (Università degli Studi di Torino), Dalia El Brashy (Università degli Studi di Torino)*

For Muslim migrant families, instilling traditional values and a strong sense of ethno-religious identity is a primary aspect of the educational process. However, in Muslim families, the role of parents is challenged by the difficulty of reconciling the different models of education, heritage and mainstream, as well as of reconciling different needs: the parents' need to preserve and transmit religious and cultural values, and the need to adapt to the values they and their children learn in their interaction with society. The study looks at the process of cultural negotiation undertaken by Muslim parents and analyses how it affects their education and parenting practises. 11 migrant Muslim parents from different nationalities ( $F = 9$ ; mean age = 48; average years in Italy = 25) participated in a semi-structured interview about their experiences of raising their children in relation to heritage and Italian culture. Atlas.ti was used for analysis. Results showed the centrality of religion in orienting the parental process of cultural negotiation and highlighted the threat of perceived cultural gap to Muslim parents' educative expectations.



## ATTITUDES TOWARDS MULTICULTURALISM FROM THE PERSPECTIVE OF THE MAJORITY. A LATENT PROFILE ANALYSIS AMONG THREE EUROPEAN POPULATIONS

*Alessia Rochira (Università del Salento), Serena Verbena (Università del Salento), Terri Mannarini (Università del Salento)*

The debate on multiculturalism is quite vivid and gives rise to critical issues. Overall, within social psychology literature, multiculturalism is discussed as desirable for positive intergroup relations. The present study aimed at understanding support for multiculturalism from the perspective of the majority. In specifics, the study was intended to identify groups of majority members based on patterns of individual and contextual variables that may either favoring or weakening support for multiculturalism. Survey data were collected from 636 subjects across three European countries, namely Italy, Spain and Portugal (212 Italians, 212 Spanish, 212 Portuguese) (F=50%, Mean age= 37.45; SD=13.18). Participants filled an online questionnaire reporting on National Identity, Interethnic Contact, Intolerance, Universalism, Psychological Resilience and Community Resilience. Backward Regression Analysis and Latent Profile Analysis were used to analyze data. A five-profiles solution fit best the data. Overall, the comparison on individual and contextual variables as a function of profile indicated that participants with higher level of interethnic contact and universalism and lower level of national identity and intolerance were more likely to endorse multiculturalism.

## INTERGROUP CONTACT IN VIRTUAL REALITY: TESTING ALLPORT'S CONTACT HYPOTHESIS IN ALTSPACEVR

*Matilde Tassinari (University of Helsinki, Finland), Inga Jasinskaja-Lahti (University of Helsinki, Finland)*

By embodying an avatar in a virtual space, a person can see and interact with others with a higher degree of immersion and body ownership compared to desktop videogames. Previous research has investigated how embodiment of outgroup members can lead to changes in attitudes towards such outgroups, but so far relatively little is known about intergroup contact in virtual reality (VR). We tested the effects of positive contact with a Black avatar in VR on implicit and explicit attitudes towards Black people. Using the free VR app AltspaceVR, 53 participants took part to a virtual experience that required engaging in a cooperative game with either a Black or a White avatar while supervised by a third avatar, steered by the experimenter. Each participant took a pre-test questionnaire and an implicit association test (IAT) a week before the intervention, and then again right after playing. The results will investigate whether and how much positive contact with a Black avatar improves explicit and implicit attitudes towards Black people. Additionally, we test the mediating effects of intergroup anxiety on attitude change.

# **SELF- AND OTHER-DEHUMANIZATION PROCESSES**

## HUMANNESS IN UNCERTAIN TIMES: THE IMPACT OF PERCEIVED JOB INSECURITY ON SELF-OBJECTIFICATION AND WELL-BEING

*Cristina Baldissarri (Università degli Studi di Milano-Bicocca), Luca Andrighetto (Università di Genova)*

The current working scenario is pervaded by a widespread perception of job insecurity – i.e., a subjective uncertainty regarding an involuntary loss of the current job in the future (Griep et al., 2016) - which represents one of the main stress factors for workers and their well-being. This research aims to investigate the impact of the perception of job insecurity on a deeper personal dimension: the tendency of people to self-objectify, that is to perceive themselves as objects rather than as human beings. Adopting a mixed methodological approach, two correlational studies (Study 1-2) and two experimental studies (Study 3-4) (total N = 684), show that the perception of job insecurity is constantly associated with self-objectification: greater perception of job insecurity corresponds to a reduction of the self-attribution of human mental states and an increase of the self-perception as tools rather than human beings. Furthermore, this self-objectifying perception is associated in turn with a decrease in well-being, playing the role of mediator in the link between the perception of job insecurity and the workers' well-being.

## STEREOTYPICAL ATTRIBUTION OF HUMANNESS TO INTERSECTIONAL CATEGORIES

*Maria Laura Bettinsoli (SWPS-Warsaw, Poland), Jaime Napier (New York University Abu Dhabi), Magdalena Formanowicz (SWPS, Warsaw, Poland)*

Past research indicates that the traits ascribed to people depend on their identities. Yet, the bulk of research has not fully considered how stereotypes may also depend on the combinations of different categories. In this research, we examined humanness stereotypical attribution to individuals identified by the combination of gender, sexual orientation (heterosexual vs. non-heterosexual), and race (Asian, Black, White, and no-labelled race). Results reveal interesting patterns. For instance, all the non-heterosexual male targets (and Black lesbian women) are stereotyped as more human than their heterosexual counterparts. We suggest that -especially but not only- sexual orientation may influence the way participants selected specific traits for targets, reducing the perceived presence of both racial and gender stereotypical traits. Future studies will consider ascriptions of agency, communion, and morality as potential mediators—that is humanness stereotyping may depend on whether the traits ascribed to the target groups are considered low (vs. high) as humanness predictors.

## HUMANITY ATTRIBUTIONS TO THE SELF IN THE WORKPLACE

*Dora Capozza (Università degli Studi di Padova), Rossella Falvo (Università degli Studi di Padova), Aurora Pasqualini (Università degli Studi di Padova)*

In this talk, we analyze the antecedents and consequences of humanizing self-perceptions in the workplace. We propose a model in which job demands (e.g., role ambiguity) and job resources (e.g., social support) (Bakker & Demerouti, 2017) are associated with the satisfaction (resources) or frustration (demands) of basic needs (autonomy, competence, and relatedness; Ryan & Deci, 2017). Need satisfaction, in turn, evoking feelings of personal growth and autonomous regulation, should be related to the perception of being fully human, that is, qualified by uniquely human (e.g., self-control) and human nature (e.g., interpersonal warmth) traits (see Haslam, 2006). The outcomes of this perception should be organizational behaviors, such as altruism, and a good performance. To test our model, we conducted a survey in which participants were 906 Italian employees. Findings supported the hypotheses: satisfaction of basic needs was a significant predictor of the attribution of human traits to the self, which, in turn, was a predictor of the outcome variables. The effects of humanity perceptions were also observed when controlling for variables generally related to performance and altruism in the workplace (e.g., organizational commitment). Practical implications of findings are discussed.

## COVID-19 RESTRICTIONS AND THE HUMAN NEEDS THREAT: ARE THERE CONNECTIONS WITH SELF-DEHUMANIZATION?

*Giuseppe Raguso (Università degli Studi di Milano-Bicocca), Cristina Baldissarri (Università degli Studi di Milano-Bicocca)*

To cope with the COVID-19 pandemic, many States have imposed for prolonged periods severe restrictions on personal freedoms and to the free development of daily activities. Many studies have been conducted to verify the effects of the pandemic on a psychological, and social level. This work particularly focuses on two aspects that have remained unexplored: the impact of Covid restrictions on the satisfaction of human needs and the sense of identification with all humanity. Our hypothesis proposes that the application of lockdown measures may have hindered the satisfaction of the basic human needs, identified in the literature as the need to belong, the need to maintain sufficiently high self-esteem, the need to control the surrounding environment and the need to feel recognized as living beings worthy of attention. We also argue that the human needs threat could have triggered a process of self-dehumanization and a consequent weaker sense of identification with the rest of humanity. These hypotheses were tested through an experimental online study which showed that participants who were asked to think back to the period of restrictions reported a greater sense of threat to their needs, a greater level of self-dehumanization and a lesser sense of identification with humanity.

## EXCLUDED FROM HUMANITY: THE IMPACT OF BIOLOGIZATION ON INDIRECT AGGRESSIVE INTENTIONS

*Roberta Rosa Valtorta (Università degli Studi di Milano-Bicocca)*

Although several authors (e.g., Savage, 2007) theoretically examined biologization (i.e., a form of dehumanization that involves the perception of others as disease organisms), empirical research on this topic is still in its infancy. Recent investigations (e.g., Valtorta et al., 2018; 2019) have demonstrated that feelings of disgust lead to higher degrees of biologization. However, very little is known about the effects of this kind of dehumanizing perception. Through the present study (N = 250), we aimed to extend the literature in this field by examining the link between biologization and indirect aggression, namely a type of harm that distances individuals or groups by diminishing their social worth through exclusion and neglect. Employing cluster analysis, we found that groups that are biologized in Italian society (e.g., homeless people and drug addicts) elicit more indirect than direct aggressive tendencies (i.e., intentions directed towards others to cause damage). Crucially, our results revealed that groups that are biologized are more likely to be excluded than groups that are animalized (e.g., immigrants and Roma). These findings shed light on biological dehumanization and its negative consequences, by thus paving the way for new understandings of the phenomenon.



# **SOCIAL JUSTICE AND EXCLUSION**

## HARMFUL BUT NEGLECTED: NEW EVIDENCE ON THE PERCEPTION OF IMPROPER WEAPONS

*Paolo Frugarello (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia), Elena Rusconi (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Remo Job (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia)*

In legislation, objects are typically classified as weapons if they are offensive per se (referred to here as proper) and if they are adapted for use as weapons or carried with the intent of causing injury (referred to here as improper), with specific regulations on their usage and possession in public spaces. However, little evidence exists on the validity of this distinction in psychology, despite a widespread recognition of the importance of psychological states and subjective perceptions in risk assessment. We conducted an online survey to evaluate subjective hazard perceptions in relation to three dimensions (dangerousness, frequency of events, controllability) of three object categories: proper weapons, improper weapons, and everyday objects. The data from our 300 respondents reveal that the three categories of objects differ from one another on the three dimensions. Moreover, the subjective perceptions of hazard differ between males and females for improper weapons but less so for proper weapons. These findings suggest that proper and improper weapons are two psychologically distinct categories, albeit with fuzzy boundaries. Investigations into their differential properties may thus help improve subjective risk assessment in security contexts.

## BEING INVISIBLE AT SCHOOL. UNDERSTANDING OUTCOMES AND MECHANISMS ASSOCIATED WITH EXPERIENCES OF OSTRACISM AMONG ADOLESCENTS

*Mara Marini (Sapienza Università di Roma), Alessandra Cecalupo (Sapienza Università di Roma), Federica Scarci (Sapienza Università di Roma), Stefano Livi (Sapienza Università di Roma)*

Ostracism is a form of social exclusion. Studies conducted so far have shown that being ignored by others exacerbates feelings of rejection that seriously harm individuals. Although research on ostracism conducted in the laboratory has primarily focused on adults, there is increasing interest in understanding the impact of this negative interpersonal experience among adolescents in real contexts. Indeed, according to the Self-Determination Theory, young people need to create and maintain positive relationships to satisfy basic psychological needs and develop interpersonal and social competencies necessary for facing multiple developmental tasks. Our study involved 375 adolescents ( $M_{age} = 16.43$ ;  $SD = 0.85$ ). It aimed at understanding the outcomes associated with ostracism experiences at school by considering the role of basic psychological needs. The results revealed that psychological needs (i.e., the need for autonomy, competence, and relatedness) mediate the relation between the experiences of social exclusion and certain aspects of the adolescents' self-image.

## COMMUNITY PARTICIPATION, ETHNIC IDENTITY, CRITICAL THINKING AND SOCIO-POLITICAL CONTROL: A MODERATED MEDIATION MODEL FOR THE IMMIGRANT POPULATION

*Sara Martinez Damia (Università Cattolica del Sacro Cuore - Universidad de Sevilla), Virginia Paloma (Universidad de Sevilla, Spain), Luesia Juan Fernando (Universidad Loyola Andalucía, Spain), Elena Marta (Università Cattolica del Sacro Cuore), Daniela Marzana (Università Cattolica del Sacro Cuore)*

Following the theoretical background, low math performance is expected in children with high MA, with a more pronounced effect in the timed standardized mathematical tasks. Similarly for the computerized tasks, high-MA children are expected to perform poorer than low-MA children in the combined task versus the stand-alone task. Altogether, these results will reflect the additional load placed by the worrisome thoughts on children's WM resources.

## PERCEIVED SOCIAL EXCLUSION AND UNIVERSITY DROPOUT: THE PROTECTIVE ROLE OF SENSE OF COMMUNITY

*Davide Mazzoni (Università degli Studi di Milano Statale), Ilaria Cutica (Università degli Studi di Milano Statale), Barbara Rosina (Università degli Studi di Milano Statale), Marina Brambilla (Università degli Studi di Milano Statale), Ketti Mazzocco (Università degli Studi di Milano Statale - IEO European Institute of Oncology IRCCS)*

Past experiences of social exclusion (e.g., social rejection, ostracism) have largely demonstrated their negative impact on university students' well-being. The aim of the present study is to investigate under which conditions the experiences of social exclusion are associated with the intention to leave the university. More specifically, we hypothesized that psychological experiences of social inclusion (i.e., social support, sense of community in the university) would reduce the effect of social exclusion on dropout intention. An online questionnaire was completed by 7.096 students from the University of Milan in February and March 2022. The results showed that exclusion experiences were associated with a significantly higher intention to leave the university. The results of the moderation model showed that this relationship was no more significant if the respondents experienced also a high sense of community. The results have important implications at the theoretical and practical level, suggesting that interventions aimed at increasing the students' sense of community could be potentially useful for reducing the students' dropout due to unsatisfactory social connections.

## HOW HIGH SOCIAL DOMINANT PEOPLE DEAL WITH HIERARCHY- ATTENUATING ENVIRONMENTS: THE ROLE OF PERCEIVED P-E MISFIT

*Alessio Tesi (Università di Pisa), Enrichetta Giannetti (Dipartimento di Scienze della Salute, Università degli Studi di Firenze), Antonio Aiello (Università di Pisa), Felicia Pratto (University of Connecticut, USA)*

We tested if social dominance orientation (SDO), the people's willingness to support group-based dominance, is an antecedent of perceived person-environment misfit (P-E misfit) when people experience a hierarchy-attenuating environment characterized by a culture that strongly favors equality among groups. We collected two waves of data from a cohort of first-year students of a social work faculty, a typical hierarchy-attenuating context. Participants answered a self-report questionnaire. SDO and perceived P-E misfit were measured. A cross-lagged panel model revealed that the initial levels of SDO predict future levels of P-E misfit, while no evidence was found for the opposite. The results contribute to enriching the embodiment of P-E fit within the Social Dominance Theory, revealing that the more people show high levels of SDO the more they will perceive misfit in hierarchy-attenuating environments. These results highlight that the P-E misfit is likely to occur in the first stage of people's socialization with the hierarchy-attenuating culture of the settings, that is when people with high SDO become gradually aware of the values pursued within a hierarchy-attenuating setting (in the six months period, between the first and the second data collection in our students' sample).

# ENVIRONMENTAL PSYCHOLOGY 2

## CO-DESIGN AND POST-OCCUPANCY EVALUATION OF A RESTORATIVE GARDEN FOR OLDER PEOPLE: THE EXP-EIA METHOD

*Marco Boffi (Università degli Studi di Milano Statale), Nicola Rainisio (Università degli Studi di Milano Statale)*

Natural environments have a restorative effect from attentional fatigue and help to revitalize psychological and physical resources, which are particularly relevant given the population ageing. Consistently, current landscape design criteria emphasize the importance of considering both functional elements and the ecosystemic people-environment relationship. To maximize the impact of such criteria, proper engagement strategies are desirable, both to assign an active role to older people and fine-tune the design project. We present the interdisciplinary co-design of a restorative garden in Milan. It included 6 focus groups with older people (N=48) about their experiences in natural environments according to Attention Restoration Theory. After the garden completion a POE was held through VR photos, due to the pandemic, applying the exp-EIA© patented method (restoration, emotions, behavioral aspects) for the analyses (N=321). The results show that the garden is perceived as restorative, with a more intense effect in a spot purposely designed. Experienced emotions are positive with a mild level of arousal. The prefigured activities are mainly contemplative and nature related. A cartographic representation of psychological and behavioral data supports the maintenance of the garden.



## REPRESENTATIONS, CULTURAL ROOTS AND LOCAL MEANINGS OF SUSTAINABILITY AMONG UNIVERSITIES AND ACADEMIC NETWORKS

*Laura Soledad Norton (Sapienza Università di Roma)*

Universities are places in which different representations of sustainability circulate and where local meanings are co-constructed among social actors. Therefore, discourses and narratives can be analyzed to understand the ways in which the concept of sustainability is used, what functions it may have, and what goals it allows to reach at an individual, group and community level. Drawing upon a constructionist and situated approach, this contribution refers to a research line that focuses on the local meanings of sustainability in academic contexts, taking into consideration two studies: the first regards an Italian Polytechnic and the conceptualization of sustainability by its community (including students, teachers and staff members); the second introduces the case of a sustainable-led university network in South America (Argentina) and focuses on the cultural and situated meanings attributed to sustainability, particularly linked to the social responsibility recognized by Argentinean (public) universities. Results shed light into the knowledge construction and on the rhetorical use of the term sustainability at and within universities, thus showing that sustainable policies and practices are being negotiated by stakeholders and local actors through transformative processes.

## INTERGENERATIONAL TRANSMISSION OF BIOSPHERIC VALUES, AND THEIR RELATIONSHIPS WITH COGNITIVE, EMOTIONAL AND IDENTITY PROCESSES OF YOUNG ADULTS: DIFFERENCES IN PATHS OF ASSOCIATION FOR DIFFERENT PRO-ENVIRONMENTAL BEHAVIORS

*Elena Rinallo (Dipartimento di Scienze Umane, Lumsa Università di Roma), Massimiliano Scopelliti (Dipartimento di Scienze Umane, Lumsa Università di Roma)*

Over the years, psychological literature has identified several determinants of Pro-Environmental Behaviors (PEBs), such as values, attitudes, and norms, also considered in comprehensive models (e.g. the Value-Belief-Norm Theory). Less investigation has been devoted to the role of emotion and identity processes. In addition, how intergenerational transmission can play a role in these processes has recently started gaining attention. The aim of this study was to investigate the relationship between Intergenerational Transmission of maternal and paternal Biospheric Values and some PEBs determinants. An online survey was administered to 172 Italian young adults, measuring the following variables: Maternal, paternal, and personal Biospheric Values; Environmental Concern (NEP); Connectedness to Nature (CNS); Dispositional Empathy with Nature (DEN); Environmental Identity (EID); and PEBs. Hierarchical Multiple Regression Analyses were performed for different PEBs in order to identify the pattern of associations between the considered variables. Results showed the existence of different and specific paths of association for each of the PEB analyzed, and the importance of intergenerational transmission of biospheric values in cognitive, emotional and identity processes of young adults.

## FROM CONSCIOUSNESS TO DENIAL OF RISK IN SOCIAL MEDIA INTERACTIONS: A MODEL FOR AUTOMATIC DETECTION OF SOCIO-PSYCHOLOGICAL PROCESSES

*Valentina Rizzoli (Dipartimento di Comunicazione e Ricerca Sociale, Sapienza Università di Roma), Alessandro Meneghini (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Jessica Neri (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Laura Soledad Norton (Dipartimento di Comunicazione e Ricerca Sociale, Sapienza Università di Roma)*

Socio-psychological processes such as denial, moral disengagement and psychological distance are expressed in natural language, functioning as barriers to effective behaviour in response to risk-exposing situations. Hence the importance of studying communication (e.g. through social media) in the construction of risk. This paper, starting from the theoretical conceptualisation of the processes mentioned above, describes the construction of a model based on categories of risk perception - from consciousness to denial - that allows the classification of texts through machine learning algorithms. Italian tweets related to the COVID-19 pandemic and climate change were collected and analysed in order to: a) identify the linguistic features (i.e. expressions in the language) of the categories of the model and b) create a training set (i.e. a set of analysed data) to train machine learning algorithms for classification (Support-Vector Machines and Random Forest) to detect psychological processes and test the effectiveness of the model itself. The results will be discussed focusing on the use of the proposed tool as a monitoring strategy and as a starting point for the implementation of effective risk communication.

# **SOCIAL COGNITION AND IDENTITY**

## COVID-19 VACCINATION INTENTION OVER THE COURSE OF THE PANDEMIC: A REPEATED CROSS-SECTIONAL STUDY

*Miriam Capasso (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Vaccines are the most effective tools to prevent COVID-19 and combat the pandemic emergency. Thus, it is essential to explore which psychological factors can influence the intention to get vaccinated and whether and how their impact change over the course of the pandemic. Using repeated cross-sectional surveys, this study investigated the efficacy of an extended Theory of Planned Behavior model (TPB) in predicting vaccination intention in three different stages: before (November 2020; N = 657), during (April 2021; N = 818), and a year later (February 2022; N = 605) the starting of the vaccination campaign in Italy. ANOVAs indicated significant differences between the studies in all investigated variables (intention, attitude, subjective norms, perceived behavioral control, anticipated affects, risk perception, trust in science, trust in government and religiosity), with a general trend of improvement in the mean scores of these variables between Studies 1 and 2, and a worsening in Study 3 compared to Studies 1 and 2. Additionally, SEM analysis showed no differences between the studies in most of the structural relationships investigated in the extended TPB model. Findings will be discussed with the aim of providing new useful information for promoting COVID-19 vaccination.

## MULTIMODAL CUES TO CHANGE YOUR MIND: EXPLORING THE INTERTWINING OF FACES, VOICES, AND BEHAVIOURS IN IMPRESSION UPDATING

*Matteo Masi (Università degli Studi di Milano-Bicocca - University of Surrey, Inghilterra), Simone Mattavelli (Università degli Studi di Milano-Bicocca), Fabio Fasoli (University of Surrey, UK), Marco Brambilla (Università degli Studi di Milano-Bicocca)*

A glimpse of a face, a few syllables uttered by a speaker or coming to know one's single behaviour are sufficient to judge a person. However, such impressions are not immutable and can be updated over time. In two experiments (N = 342), we compared the effect of distinct cues (i.e., faces, voices, behaviours) on both updating of and resistance to countervailing information. In Experiment 1, we investigated which cue updated more strongly behaviour-based impressions. In Experiment 2, we also investigated the resistance of impressions based on seeing a face or listening to a voice to additional behavioural information. Hence, we compared such resistance to faces and voices' impression updating power. Across experiments, albeit behaviours being the most effective way of updating behaviour-based impressions, such impressions were equally updated by additional facial and vocal information. However, voice-based impressions showed resistance to countervailing behavioural information to a greater extent than face-based ones. Our results extend prior findings on impression updating providing evidence of multi-modal development of impressions over time.

## MORAL ELEVATION AND PROSOCIAL INTENTIONS: THE MODERATOR ROLE OF SOCIAL IDENTITY

*Giovanni Telesca (Università degli Studi di Siena), Marika Rullo (Università degli Studi di Siena)*

Recent findings suggest that people can experience feelings of moral elevation when witnessing uncommon moral virtue and consequently being more prone to engage in moral behaviors (e.g. prosociality, honesty, etc). However, people can potentially perceive outstanding moral exemplars as a threat to their self-concept due to negative social comparison and consequently derogate them. In the present research, we aim at investigating the role of social identity in moderating these two responses (i.e. positive and negative). We predicted that even in the presence of a negative social comparison, when moral models are ingroup members, people will be more prone to show elevation and consequently imitate responses as opposed to when moral models are outgroup members. In an online experiment (N=211) we showed participants a video where a person (same gender as participants vs different gender) helped clochards (vs. control video) and then measured their elevation feelings and prosocial intention. The results indicate that when the moral model was of the same gender of the participants (i.e. ingroup member), participants experienced more elevation and reported more prosocial intentions as compared to when the moral model was of a different gender (i.e. outgroup member).

## BLINDED BY LOVE OR MOTIVATION? THE NEED FOR CLOSURE IN THE PERCEPTION OF PARTNERS' ROMANTIC PASSION

*Annalisa Theodorou (Università degli Studi Roma Tre), Stefano Livi (Sapienza Università di Roma)*

Individuals are determined to have a reassuring vision of the degree of their partners' romantic passion. This is particularly true for individuals with a high need for closure (NFC). Extremely concerned about certainty, they should be motivated by greater bias and lesser accuracy in perceiving partners' passion. Nevertheless, as partners' obsessive passion leads to more visible behaviors, it should be less subject to bias than harmonious passion. Relying on the Truth & Bias model (West & Kenny, 2011), we propose the role of NFC as a moderating variable in the interpersonal perception of romantic passion. We interviewed 315 heterosexual couples with a questionnaire collecting measures of NFC and self- and other-reported harmonious and obsessive passion. Our hypotheses were confirmed. Results showed that NFC had a moderating role in the assumed similarity and accuracy effects in harmonious but not obsessive passion. In particular, high NFC individuals showed greater assumed similarity and lower accuracy compared to low NFC individuals. As the need for closure can also be heightened by situational factors such as time pressure and fatigue, results suggest considering that this effect can be present also during specific moments of romantic relationships (e. g., marriage).



# **SOCIAL PSYCHOLOGY AND WELLBEING**

## HOW PERCEIVED CULTURAL TIGHTNESS AND PREVENTION FOCUS CAN AFFECT SUBJECTIVE WELL-BEING

*Federico Contu (Università La Sapienza Roma - Università Vita-Salute San Raffaele Milano), Daniela Di Santo (Sapienza Università di Roma)*

Subjective well-being can be amplified by the match between individuals' characteristics and the prevailing culture in their environment, according to an interactionist perspective. Consistently, we tested the hypothesis that people's life satisfaction may increase when people perceive high cultural tightness (i.e., strict social norms and punishments for deviance) where they reside and they simultaneously have a high prevention focus (i.e., a regulatory focus on safety and the avoidance of undesirable outcomes by following the rules). We enrolled 472 participants residing in Italy in a study conducted with a cross-sectional design. The hypothesis was tested through a moderated multiple regression model. As predicted, prevention focus moderated the effect of cultural tightness perceived in one's place of residence on life satisfaction. More specifically, in a condition of high (vs. low) prevention focus, perceived cultural tightness was positively associated to life satisfaction. Notably, data were collected during the COVID-19 pandemic, a particular health threat that could possibly have increased the prevention focus of individuals, while tightening the social norms to survive the threat. Practical and research implications will be discussed.

## COVID-19 AND THE ELDERLY'S WELL-BEING: THE ROLE OF POSITIVE AFFECT, CONFIDENCE IN THE FUTURE, RISK PERCEPTION, SOCIAL ISOLATION, LONELINESS AND AGEISM

*Anna Rosa Donizzetti (Università degli Studi di Napoli Federico II)*

The COVID-19 pandemic has particularly affected the elderly population both in terms of the high number of victims and the psychological impact. Moreover, the pandemic has made the elderly more vulnerable to isolation and loneliness, and victims of ageism. The general objective of the present study was to investigate the risk and protective factors for the well-being of the elderly during the pandemic. The role of some variables was considered, such as: positive affect, confidence in the future, risk perception, fear, social isolation, loneliness and ageism. A self-report questionnaire was administered to 1301 participants (mean age: 77.3 years), almost equally distributed by gender (56.1% female). Descriptive and correlational analyses were performed, together with SEM. The results showed that perceived age discrimination positively predicts loneliness and negatively and indirectly predicts well-being. Furthermore, positive affect, confidence in the future and a rich network of social relationships are protective factors, while loneliness, risk perception, fear of COVID-19 and ageism are risk factors (RMSEA=.05; SRMR=.03; TLI=.95). Therefore, future emergency policies must take into account the impact of such actions on the well-being/disease of this segment of the population.

## THE PERSON-SOCIETY FIT: SOCIETAL GOOD DEVELOPMENT AND HAPPINESS AND WELL-BEING

*Fridanna Maricchiolo (Università degli Studi Roma Tre), Kuba Kryś (Polish Academy of Science, Poland), Marco Lauriola (Sapienza Università di Roma), Oriana Mosca (Università di Cagliari)*

The Person-Environment (P-E) fit theory suggests that well-being is a function of people's interactions with their environments, and that the congruence between personal and environmental promotes well-being. Due to its ability to generate positive feelings, P-E fit has the potential to lead to happiness in life. The present study, that is part of a large cross-cultural (about 50 countries) investigation, is aimed to analyse the relation between people visions of societal good development and different types of well-being. We have administered an on-line questionnaire to a general sample (N = 206, F= 69.4% M= 28.6%, Other=1.9%, mean age of 33.39 years, sd = 12.33) with different measures: a set of scales measuring different form of societal well-being (1. Sustainable Development Goals, 2. the OECD measure of well-being, 3. an ad-hoc built scale of a good society's aims); a set of measures of individual well-being (1. Satisfaction with Life, 2. Harmony in life, 3. Meaning of Life, 4. Spirituality); Sense of responsibility Scale, regret, regulatory foci. The results will be discussed in the light of the literature on the P-E fit with specific reference to person-society fit. Limitations and future developments will be addressed.

## SOCIAL ISOLATION AND CONFINEMENT IN A GROUND-SIMULATED LUNAR MISSION: CONSEQUENCES AND PROTECTIVE FACTORS

*Patrice Rusconi (Università degli Studi di Messina), Paolo Riva (Università degli Studi di Milano-Bicocca), Luca Pancani (Università degli Studi di Milano-Bicocca), Konstantin Chtereov (University of Surrey, UK)*

Astronauts taking part in space missions face physical, but also psychological challenges. One of the main psychological stressors experienced in space missions and simulations in extreme environments is social isolation. The present study focuses on LUNARK, the first Arctic lunar simulated mission in which two space architects lived confined and isolated in a Moon analog habitat in Northern Greenland for 61 days. We used daily self-reported measures of feelings and perceptions to gauge the impact of social isolation and confinement on the two space architects' psychological wellbeing over time. The results showed that a typical marker of chronic social isolation, that is, psychological resignation, did not linearly increase with time, while the desire for social contact did. Some daily activities were protective factors against the negative effects of prolonged social isolation, namely talking about personal matters to the other team member, leisure time (e.g., reading), and physical exercise. We discuss these results by comparing the effects of chronic social isolation when the person is a victim of an episode of social exclusion and when an individual is actively motivated to achieve a goal and knows when the period of social isolation and confinement will end.

## HEALTH PSYCHOLOGY 2

## AFTER LOCKDOWN: PERCEPTIONS, EXPERIENCES, AND EFFECTS ON PEOPLE'S WELL-BEING

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Despite the COVID-19 pandemic and the subsequent measures of containment have stimulated multiple studies aimed at assessing its impact on people's psychophysical well-being, few studies investigated people's experiences by adopting a mixed method approach. An online survey was conducted in the period following the first lockdown. Psychological well-being, perceived stress and COVID-19-Related Fears were assessed by standardized questionnaires PGWBI, PSS, and MAC-RF. Participants were also asked to answer some open-ended questions about the experiences and perceptions related to the lockdown period and to the subsequent recovery. A total of 855 participants completed the survey. Data show a lower level of well-being compared to normative levels, and a high level of both perceived stress, and fear of contracting the virus. The analysis of the open-ended responses, carried out through T-Lab software, reveal two factors and five clusters that explain the thematic variance among the narratives collected: the first factor refers to the type of experience (positive vs. negative); the second refers to the type of context (home vs. work). The results confirm the effectiveness of the integrated method for an in-depth and exhaustive investigation of people's state of well-being.

## KNOWLEDGE, ATTITUDES AND FOOD SAFETY PRACTICES OF RAW FISH CONSUMERS: HOW TO UNDERSTAND THEIR RISK PERCEPTION AND FUTURE BEHAVIOR INTENTIONS TO PROMOTE THEIR HEALTH PREVENTING THE RISK OF INFECTION

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The study of Anisakis is an increasingly hot topic in medicine, biology and epidemiological studies. However the assessment of social-psychological factors relevant for Anisakis' risky consumption behaviors is still a missing topic. A lot of psychological research focused on antecedents of fish and seafood consumption, however parasite risk is not often specifically examined. This research is aimed at increasing safety for seafood products consumers', examining their knowledge, perception, awareness and concern about Anisakis. Past behaviors and future behavior intentions were also investigated. Analyses, conducted on a sample of 251 subjects, aim to provide descriptive data and then try to hypothesize regression models that explain possible causality assumptions among the variables. Results show that knowledge (subjective and objective) about Anisakis and past experience (norms and habits) linked to the consumption of raw fish, can significantly predict Anisakiasis risk perception and future behavior intentions (fish avoidance and willingness to pay for Anisakis-free fish products). It also emerges how some sociodemographic variables (e.g., age) significantly influence knowledge. The study then examined the influence of perceived health and the correlations between key variables



## DYADIC COPING AND SELF-MANAGEMENT OUTCOMES IN CARDIOVASCULAR PATIENTS

*Giada Rapelli (Università Cattolica del Sacro Cuore), Raffaella Iafrate (Università Cattolica del Sacro Cuore), Anna Bertoni (Università Cattolica del Sacro Cuore)*

Cardiac patients show alarming nonadherence to medications. It is important to consider also patient activation levels. The partner could have a supporting role in these processes. We investigate the mediating role of patient health self-efficacy (HSE) in the link between dyadic coping (DC) and two self-management outcomes (i.e. medication adherence and patient activation) during hospitalization for cardiac disease and 6 months after discharge. A longitudinal and dyadic research design was adopted with one hundred couples who completed two self-report questionnaires. At T0 patient-provided and perceived positive DC and common DC are positively associated with HSE, which in turn is positively associated with medication adherence. Conversely, patient-provided and perceived negative DC are negatively associated with HSE, which in turn is positively associated with medication adherence and patient activation. Prospective analyses showed that only patient-perceived negative DC at discharge is negatively associated with HSE at T1, which in turn is positively associated with patient activation over time. These results suggest considering patient perceived and provided DC as antecedents of self-management outcomes via patient HSE and to pay particular attention on negative DC.

## **INTERGROUP RELATIONS 2**

## ONLINE INTERGROUP CONTACT FOR MAJORITIES AND MINORITIES: WHAT CONDITIONS IMPROVE THE EFFECTS?

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Intergroup contact has been proven to be an effective strategy for improving relations between different social groups. Although direct contact has been extensively studied, there is still little evidence for online intergroup contact occurring spontaneously and through social media, and most of it has focused on majority social groups. In our study, we investigated the effects of online contact for majority and minority, verifying whether the optimal conditions identified by Allport (1954) in the Intergroup Contact Theory - cooperation, common goals, equal status and authority support - could facilitate the positive effects of online contact (moderation). 289 heterosexual and homosexual Italian adults participated in the study. Allport conditions, quality and quantity of online intergroup contact and several intergroup variables were investigated. The results show that the conditions investigated do not moderate the effects of online contact. However, for homosexuals, as perception of common goals and equal status increases, the effects of contact quality on intergroup trust improve.

## BREASTFEEDING AND BOTTLE-FEEDING MOTHERS: NEGATIVE STEREOTYPES AND INTERGROUP BIAS

*Margherita Guidetti (Università degli Studi di Modena e Reggio Emilia), Luciana Carraro (Università degli Studi di Padova), Luigi Castelli (Università degli Studi di Padova)*

Though the discourse on the “mommy war” has become quite popular in the last few decades, no studies have yet investigated how breastfeeding and bottle-feeding mothers feel judged and their reciprocal attitudes. In a first qualitative and explorative phase, we informally asked mothers, through Facebook groups, whether they felt judged for their feeding choice and how. This allowed to identify 26 positive and negative recurrent traits. In Study 1 (N=992) we tested whether these traits were stereotypically associated with breastfeeding and bottle-feeding mothers, according to their own perception. Mothers perceived each category as differentially judged on each trait, resulting in different negative stereotypes associated with the two groups. These stereotypes were shared by all participants, though for some traits the differences between the two groups amplified when the ingroup was considered negatively. In Study 2 (N=559) we explored breastfeeding and bottle-feeding mothers’ reciprocal attitudes and the moderating role of anticipated reproach from the outgroup. Results confirmed the existence of an intergroup bias between breastfeeding and bottle-feeding mothers, but also showed that this bias was significantly stronger when mothers perceived higher criticism from the outgroup.

## MIGRANTS' ADAPTATION PROCESS: THE ROLE OF INTERGROUP CONTACT VALENCE ON SUPPORT FOR SOCIAL CHANGE

*Francesca Prati (Università di Bologna), Corine Stella Kana Kenfack (Sapienza Università di Roma)*

This research investigates the relationship between different valence contact of migrants with native people and their behavioural intentions to reduce social inequalities and ameliorate societal issues. Specifically, the joint and differential effects of positive and negative contact of migrants with natives on collective action and civic engagement were addressed across two studies by examining the mediating role of positive and negative emotions. Hypotheses were tested on two samples of African immigrants in Italy (N = 242). Positive contact was associated with collective action among respondents who reported lower negative contact with native Italians and the relationship between positive contact and collective action was mediated by higher anger and anxiety. Moreover, the relationship between positive contact and civic engagement was stronger for immigrants with reduced negative contact with native Italians. Fear mediated this relationship. Overall, we gathered further knowledge of the impact of intergroup contact and affective factors on immigrants' behavioural intentions to engage in behavioural action to reduce societal disparities in their host society.

## INTERGROUP RELATIONS IN GROUP CARE. A DISCURSIVE ANALYSIS OF PROFESSIONALS TALKING ABOUT EXTERNAL AND INTERNAL GROUPS

*Marzia Saglietti (Sapienza Università di Roma), Filomena Marino (Sapienza Università di Roma)*

Focusing on intergroup relations, this study analyzes its discursive accomplishment in group care for out-of-home children. Due to its social mandate, group care is organized in groups, delivered by groups of professionals, and connected with other groups (e.g., children's biological families, schools, social services). For the purpose of this study, we combine a quali-quantitative approach to three differently-organized Italian group care facilities' ethnographic interviews and focus on the discursive accomplishment of ingroup-outgroup opposition, ingroup bias and group qualification. Differently from laboratory studies, our results show that intergroup relations are locally tied and categorically permeable, accounting for multiple groups at the same time – either in the past, present or future – by means of different positionalities from the participants' parts. In terms of comparison between the three facilities, we illustrate how, when talking about ingroup-outgroup, participants differently rely on turn orchestration, social categorization markers and qualifying devices. These results, together with our ethnographic observations and interactive studies, opens interesting new reflections on the isomorphism of discourses, practices and (interactive) work.

## **POLITICAL PSYCHOLOGY 2**

## THE ROLE OF AFFECTIVE AND COGNITIVE INDIVIDUAL ORIENTATION IN THE INTENTION TO VOTE POLITICAL ACTIVISTS

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The literature has shown that individual affective (NFA) and cognitive (NFC) orientation influence the evaluation of people described with warm (affective correspondence) and competence traits (cognitive correspondence). This study aims to verify this effect in political communication, investigating the effect of affective and cognitive correspondence on the intention to vote and the possible moderation of political sophistication in this process. After completing the NFA and NFC measurements, 127 participants read the descriptions of four political activists described as warm, cold, competent, or incompetent. Later, the participants expressed their attitude and intention to vote. The results showed that affective correspondence predicts the intention to vote towards the warm activist, while cognitive correspondence predicts the intention to vote towards the competent activist. Political sophistication is a marginal moderator: the effect of affective correspondence on the intention to vote the warm activist is observed at high levels of sophistication. The results highlight for the first time the correspondence effect in the political context, providing insights for the study of persuasion in this area.



## COUNTERFACTUAL THINKING AS A PREBUNKING STRATEGY TO CONTRAST MISINFORMATION ON COVID-19

*Mauro Bertolotti (Università Cattolica del Sacro Cuore)*

Past research has shown that debunking is rarely successful in contrasting fake news and conspiracy theories, while alternative pre-emptive strategies, such as inoculation and prebunking, have shown more promising results. In the present research, we tested whether counterfactual thinking (i.e. “If...then...”) can be employed as a prebunking strategy to prompt critical consideration of fake news and conspiracy theories spread online. In two experiments, we asked participants to read or generate counterfactuals on the research and development of COVID-19 treatments, and then to evaluate the veridicality and plausibility of a fake news headline related to the topic. Participants’ conspiracist mentality was also measured. Highly conspiracist participants exposed to counterfactual prebunking rated the fake news headline less plausible than highly conspiracist participants in the control condition (Study 1) and those who were exposed to another type of prebunking (Study 2). The higher success of counterfactual prebunking was mediated by the lower perceived identity threat of this prebunking strategy. Discussion focuses on the development of new strategies to prevent the spread of misinformation and the conditions under which these strategies may be successful.

## HOUSEHOLD CROWDING CAN HAVE POLITICAL EFFECTS: SUPPORT FOR ANTI-DEMOCRATIC POLITICAL SYSTEMS DUE TO THE COVID-19 LOCKDOWN IN ITALY

*Michele Roccato (Università degli Studi di Torino), Nicoletta Cavazza (Università degli Studi di Modena e Reggio Emilia), Pasquale Colloca (Università di Bologna), Silvia Russo (Università degli Studi di Torino)*

We performed two studies to analyse some political consequences of household crowding during the 2020 COVID-19 lockdown across a wide quota sample of the Italian adult population, stratified as concerns gender, age, level of education and geographical area of residence. We interviewed our sample six times, in May–June 2019, April and October 2020, April and October 2021 and April 2022. In Study 1, performed using the first two waves (N = 1,047), path analysis showed that household crowding during the lockdown was positively associated with support for anti-democratic political systems, through the partial mediation of the perceived relative impact of COVID-19 on one's family and of expectations of future lifestyle restrictions due to the pandemic. In Study 2, performed using all of the six waves (N = 990), we showed that the increase in support for anti-democratic systems associated with household overcrowding in the initial phase of the lockdown (Wave 2) did not change over the subsequent 23 months. Moreover, the effect was stronger among those who expressed a low (versus high) preference for a strong leader before the pandemic. Strengths, limitations and potential developments of the study are discussed.

## IDEOLOGY AND FRAMING EFFECTS ON THE REACTION TO DIFFERENT SOCIAL THREATS

*Alessia Valmori (Università degli Studi di Padova), Luciana Carraro (Università degli Studi di Padova),  
Luigi Castelli (Università degli Studi di Padova)*

According to the Moral Foundations Theory, left-wing and right-wing people embrace different moral values: The former rely more on the individualizing foundations, whereas the latter on the binding foundations. This distinction may help explaining the distance between the two groups about different social issues. For this reason, moral framing may represent an effective technique to change people's attitudes as a function of their political orientation. The aim of the current project was to investigate the impact of framing a threat (i.e., socioeconomic inequalities, gender inequalities and immigration) with individualizing vs. binding foundations on right-wing and left-wing participants' attitudes towards each specific threat. Results showed that overall right-wing participants justify more the unequal system and are less tolerant toward the immigrants compared to left-wing participants. However, when right-wing participants were assigned to the binding condition, they showed less extreme attitudes. Taken together the results of these three studies suggest that the moral framing may help bridging the divide between right-wing and left-wing individuals. Moreover, these results underline the importance of message tailoring also about moral content.

# **VIOLENCE, AGGRESSIVE AND PROSOCIAL BEHAVIOUR**

## TRAINING THE HEART AND THE MIND: HOW DIFFERENT COMPASSION TRAININGS AFFECT REACTIONS TOWARD A NEGATIVELY PERCEIVED SUFFERING TARGET

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To test whether priming compassion buffers people's tendency to react poorly to the suffering of people behaving badly, we developed two trainings, based on two Buddhist conceptualizations of compassion. The Affective training primes compassion that arises from the love for relatives and close others; the Rational-Affective training highlights the similarities we share with others, including people we dislike. In Study 1 (N = 139), participants did one of the trainings or a control task, then read the story of a suffering person and reported their reactions. Participants in the training (vs. control) conditions reported higher compassion and prosociality – the latter especially in the Rational-Affective condition – toward a suffering person who previously committed an interpersonal transgression. In Study 2 (N = 697), we also manipulated the story of the suffering target (positive: no transgression vs. negative: collective moral transgression). Participants assigned to the Affective training reported more compassion and prosociality toward the negative target compared to control and Rational-Affective conditions. Moreover, the Affective training removed the difference in compassion and prosociality toward the positive vs. the negative target observed in the other conditions.

## THE EVALUATION OF THE EFFECTIVENESS OF THE TABBY IMPROVED PROGRAM - A ONE YEAR STUDY FOLLOW-UP

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Cyberbullying is a widespread phenomenon involving a significant number of children and adolescents. The COVID-19 has significantly increased youngsters' involvement in this kind of peer aggression and several studies underlined the negative consequences associated with cyberbullying, including it as a significant predictor of deviant and delinquent behaviors over time. Preventing and reducing youngsters' involvement in cyberbullying could be considered a priority. The Tabby Improved Program was developed by combining the Ecological system theory and the need assessment approach in order to develop and deliver a holistic, multi-componential program to address cyberbullying. To assess its' effectiveness a longitudinal and experimental study was carried out involving a sample of 622 students (40.8% experimental vs 59.2% control group) aged between 10 to 17 years ( $M=12.38$ ,  $SD=1.45$ ). The results underlined the program's effectiveness after a 6-months follow-up in reducing cyberbullying. However, results concerning the long-term follow-up highlighted that in absence of researchers' interventions no significant differences were found in participants' involvement in cyberbullying between the study conditions. The results will be discussed in terms of practical and policy intervention.

## AMBITIOUS PEOPLE ARE MORE PRONE TO ENGAGE IN COSTLY AID PROGRAMS

*Marta Viola (Sapienza Università di Roma)*

In line with Significance Quest Theory (SQT, Kruglanski et al., 2022) and Costly Signaling Theory (CST, Smith & Bird, 2000; Zahavi, 1995), the purpose of the present research is to investigate the relationship between individual differences in ambition and support for costly (in terms of investment of time, money, or energy) aid programs. Consistent with the Significance Quest Theory (SQT), in which the quest for significance is a universal need that may also lead to any type (e.g., violent and prosocial) of extreme behavior for the purpose of satisfying it, it has been hypothesized that the ambitious people are more motivated to engage in costly aid programs with the goal of gaining respect, prestige, and recognition from significant others. In three studies (Total N = 600), both correlational (Studies 1 and 2) and experimental (Study 3), a significant positive relationship was found between levels of ambition and support for costly aid programs, and that this relationship was mediated by difficulty perceived as important, i.e. the attribution of high value to difficult tasks and goals (Study 2). In summary, ambition may lead to engage in more difficult/costly behaviors with the goal of gaining social recognition (i.e., significance).

# MINITALK



## WASTING FOOD. THE ROLE OF WASTEFUL HABITS AND EMOTIONS IN THE THEORY OF PLANNED BEHAVIOR

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The research comprised a pilot study on a group of 112 university students (92 females), and a two-wave prospective online survey with 287 university students (219 females) with a time lag of one month. Through the pilot study ten behaviors of food waste and ten behaviors aimed at avoiding food waste were identified, used in the main study in order to capture past behavior of food waste at T1, and the behavior of avoiding food waste at T2. A relation model rooted in the Theory of Planned Behavior (TPB) extended with past behavior and indicators of negative (e.g., regret, guilt) vs. positive (e.g., pride, happiness) emotions related to wasting vs. avoiding food waste was hypothesized. Results of path analysis performed via LISREL revealed that intention to avoid food waste was positively related to attitude, perceived behavioral control and negative emotions, all measured at T1. In turn, the behavior of avoiding food waste at T2 was positively related to intention and positive emotions, and negatively related to past behavior of food waste. The TPB extended model accounted for 72% of the intention variance and for 39% of the behavior variance. Theoretical and practical implications are discussed.

## THE RELATIONSHIP BETWEEN SENSE OF COHERENCE, WELL-BEING AND LIFESTYLE IN A COVID-19 PERIOD

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The relationship between sense of coherence (SOC), well-being and lifestyle during a stress period, such as COVID-19, is still under discussion. The present study aimed to evaluate two models that can clarify the role of SOC as a predictor of well-being and lifestyle and the relationship between well-being and health behavior. This can help better understand the factors behind well-being and a healthy lifestyle during stress period, such as pandemic COVID-19. The study involved 1065 subjects (mean age = 44.9 years; SD = 19.6 years). Structural equation model (SEM) was applied. In both models the SOC assumes the role of predictor for well-being and physical activity and nutrition. In the first model we verified whether well-being assumes a mediator role on physical exercise and nutrition; in the second model, nutrition and physical exercise were mediators of well-being. The results of SEM show that only the second model is the acceptable one, the fit index is adequate. SOC is predictive of well-being and physical activity. Physical activity in turn predicts social, emotional and psychological well-being. Identifying the relationship between SOC, well-being and lifestyle is important to better identify and clarify protective factors on which to intervene through tailored programs.

## THE SOCIAL EVALUATION OF SPORTSPEOPLE WITH DISABILITIES

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The stigmatization ascribed to disability social identity can lead to marginalization and discrimination. Although the social perceptions of stigmatized groups are usually resistant to change, it seems that people with disabilities who engage in sports receive more positive evaluations, at least explicitly (Clément-Guillot et al., 2018). We explored the social perception of sportspeople with disabilities through the Stereotype Content Model (SCM; Fiske et al., 2002), to check the assumptions which depict people with disabilities as warm but incompetent. This study aims to extend the SCM to sportspeople subgroups. From a social identity perspective (Ellemers & Haslam, 2012), we investigate the attributions of warmth and competence to people with disabilities. A 2 (sport vs no sport) x 2 (people with disabilities compared to people without disabilities) design, checked by age, nationality and sport subgroups, predicted the distributions along competence and warmth dimensions. The sample (N=120) confirmed the ambivalent stereotypes of disability combined with sports social status, supporting the SCM findings and the socio-structural hypothesis.

## USING ECO-FRIENDLY REUSABLE BOTTLE. THE ROLE OF BELIEFS IN THE THEORY OF PLANNED BEHAVIOR

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The study aimed to predict the use of reusable bottles with the theory of planned behavior (TPB) and to identify the most relevant beliefs about this behavior. The research comprised an elicitation study and a main study. The first study aimed to identify behavioral, normative and control beliefs. The main study adopted a two-wave prospective online survey design with 257 participants. At t1, self-report measures of TPB constructs and beliefs were obtained. Behavior was measured at t2. Results of SEM proved that TPB model accounted for 73% of the intention variance and 49% of the behavior variance. Intention was significantly associated with Perceived Behavioral Control (PBC) and attitude. Behavior was predicted by intention, PBC and age (younger people use these bottles more than older people do). The links between the beliefs composites (computed in accordance with the expectancy-value model) and the respective measures of TPB constructs were all significant. The most relevant behavioral beliefs regarded practicality, healthy and concern for the environment. The most important control belief was to have practical and convenient reusable bottles. The examination of the effects of the specific beliefs may have several implications for designing behavior-change interventions.

## “GENDERED” PUBLIC SPACE STEREOTYPES INFLUENCE ENVIRONMENTAL BEHAVIOR

*Giulio Faccenda (Università degli Studi di Milano-Bicocca), Simona Sacchi (Università degli Studi di Milano-Bicocca)*

Sociologists and geographers argue about the existence of two ideal separate spheres, private and public, and their association with gender identity, i.e., public spaces are socially perceived as belonging to masculinity and private spaces to femininity. However, the stereotypical association between public space and gender – as well as its social consequences – has never been examined empirically. To fill this gap, an experimental study was carried out to investigate how “masculinity-public space” association is likely to moderate the perception of pro- and anti-environmental behaviors (PEBs and AEBs). It was hypothesized that, for high level of “masculinity-public space” association, men showing PEBs (AEBs) in public spaces will be less admired (more condemned) than women, whereas men showing PEBs (AEBs) in private spaces will be more admired (less condemned) than women. To test this hypothesis, participants were presented with a series of actions (PEBS and AEBS) performed by women or men in urban public, outdoor places (streets) or in private, indoor places (home). The strength of “masculinity-public space” association was assessed both implicitly (single category IAT) and explicitly. Implications of the role of gender stereotypes on environmental behavior are discussed.

## SOCIAL SUPPORT IN REMOTE WORK: THE IMPACT ON ORGANIZATIONAL IDENTIFICATION AND ENGAGEMENT

*Libera Anna Insalata (Sapienza Università di Roma), Alessandro Lorenzo Mura (Sapienza Università di Roma)*

With the introduction of Smart Working globally, mainly due to the COVID-19 pandemic, many workers have to face a shift from classic presence configurations to a remote context, characterized by reduced face-to-face interactions. This removal from the environmental context may also have affected the quality and quantity of social relations within the organizational context. The study, currently underway and which will involve managers and professionals hired in companies where the practice of Smart Working has become structural post-pandemic, aims to analyze these forms of relationships and social support (both from direct line managers and colleagues), which could be one of the most incident variables in promoting occupational well-being and engagement, as well as maintaining organizational identity. On the contrary, in the condition of Smart Working, an absence or partial presence of social support can create detachment and be negatively related to the development or maintenance of identification. Social support, therefore, could be the variable that guarantees the retention of talents in the company in this period of transformation of working methods in the company.

## THE PSYCHOSOCIAL IMPACT OF THE COVID-19 PANDEMIC ON WOMEN'S PERINATAL WELLBEING

*Federica Mari (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Marcella Bianchi (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II)*

Since little attention was paid to the psychosocial impact of the COVID-19 pandemic on perinatal women's well-being, the present study explored the psychosocial changes associated with the pandemic in the perinatal period, using a Grounded Theory approach. Twenty-one Italian women who gave birth between March and November 2020 took part in semi-structured interviews, exploring their childbirth experiences. Our findings suggested the enhanced importance of social support as a protective factor against the uncertainties that characterized the perinatal period in the pandemic. The latter resulted mainly linked to the discontinuity in the intrapartum care, along with the concern of being infected with COVID-19, and other pregnancy-specific worries. We found that the main sources of social support were embodied by significant others- most of all partners, as well as health care staff and peer networks. The experience of receiving support counterbalanced the impact of uncertainties, while its lack worsened it. Our findings recommend the importance of implementing evidence-based policy and interventions to improve women's wellbeing during the perinatal period in the pandemic, simultaneously guarantying intrapartum care continuity and the presence of social support.

## THE EFFECTS OF IDEALIZATION IN THE ONLINE DATING WORLD: SEEING FEWER PHOTOS OF THE POTENTIAL PARTNER LEADS TO LESS ATTRACTION AND EXPECTANCY VIOLATION

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Based on expectancy violation theory (Burgoon, 1993) and previous research on online dating (Ramirez & Wang, 2008), we hypothesized that seeing fewer pictures of a potential partner on a famous dating app leads to idealizing this person's characteristics and, in turn, to violating expectations when switching to offline dating. To test this hypothesis, 57 adults attracted to men were randomly assigned to one of two experimental conditions. In the evaluation of the online profile of a young man, half of them viewed 18 photos of the potential partner, while the other half viewed only 4 photos randomly extracted from the set. Participants' perceived attraction, pleasantness, and impressions about the man's expected personality were thus measured before and after watching a video interview of the target aimed at simulating an offline date. As predicted, after viewing the video, participants who had previously seen fewer photos reported lower attraction,  $F(1,54) = 5.16$ ,  $p = .027$ , less perceived pleasantness of the target's gestures and posture,  $F(1,53) = 3.05$ ,  $p = .086$ , and worse expectations about his personality,  $F(1,53) = 7.03$ ,  $p = .011$ . Results support our hypothesis and have important implications for the study of online behaviors and romantic relationships.



## SOCCER TEAM AND DISABILITY: THE PERCEIVED BENEFITS OF SOCIAL IDENTIFICATION

*Cristina Mosso (Università degli Studi di Torino), Annalisa Cerrone (Insuperabili SSDRL), Omar Hanafi (Insuperabili SSDRL), Elena Peila (Centro Medico Mens CPZ)*

This study explores the relationship between team cohesion and wellbeing among youth athletes with intellectual disabilities who are members of soccer teams affiliated to an Italian national Academy. Based on the social identity approach and self-categorization theory (Dirth & Branscombe, 2018; Oja et al. 2015), the study focused on the understanding of participation and its implication on self-identity as well on the common identification in football. 50 male athletes, aged 16 to 43 years were interviewed. Using thematic analysis four aspects of sport participation and team cohesion emerged including socialisation opportunities, identities development, pure enjoyment, a sense of freedom providing an arena to challenge stereotypes. Findings suggest that competitive sports participation facilitates identification with valued social roles, supports outcomes related to sport cohesion with Perceived empowers athletes with disabilities to enablers to social inclusion. More research is needed to explore these perduring effects and to compare perceived benefits between populations to enable tailored promotion of sport.

## FROM MODERATE ACTION TO RADICAL INTENTIONS: DISENTANGLING SOCIAL-IDENTITY BASED MODELS PREDICTING CRIME AS PROTEST

*Sara Panerati (Università di Bologna), Hedy Greijdanus (University of Groningen, Netherlands), Tom Postmes (University of Groningen, Netherlands), Russell Spears (University of Groningen, Netherlands)*

This work investigates how anti-Trump democrats (N=460), before the 2020 election, managed their options to protest against Trump and his supporters, focusing on when moderate collective action and their outcome predict more radical (and violent) intentions. The study investigated the relationship between moderate action involvement and the effectiveness of radical action intentions and the effects of various other variables, such as (intergroup) emotions, group identification, and political vs. participative efficacy. The results show that although moderate action involvement correlated with radical intentions, the effectiveness of moderate action is negatively related to radical intentions. Analogously, whereas political efficacy positively predicted radical action as moderate action involvement increased, participative efficacy negatively predicted radical action with increasing moderate action experience. Social identity-based models of collective action explain this escalation/radicalization path (e.g., ESIM) and the counteracting effect of efficacy forms (SIDE model, NTL framework). These findings highlight the complexity phenomenon, which involves individual-level and collective-level appraisals that affect escalation intentions in a group that lost its power.

## WOMEN AND MONEY: AN (IM-)POSSIBLE COMBINATION? A QUALITATIVE STUDY ON GENDER STEREOTYPES AND WOMEN IDENTITY, RELATIONSHIPS, AND MONEY MANAGEMENT BEHAVIORS

*Eleonora Reverberi (Università Cattolica del Sacro Cuore), Claudia Manzi (Università Cattolica del Sacro Cuore), Eleonora Crapolichio (Università Cattolica del Sacro Cuore), Cinzia Castiglioni (Università Cattolica del Sacro Cuore), Edoardo Lozza (Università Cattolica del Sacro Cuore)*

In managing money men appear more prepared and confident than women, which instead are more anxious and troubled. Although women are increasingly active and present today, the financial sector is still considered a stereotypically male domain. Thus, this stereotype may affect women identity, relationship and money management behaviors. The research involved 32 working women (27 to 55 years, employees or self-employed, different for SES), in 4 focus groups, which explored the relationship between money and identity, relationships and asset management behaviors. The results show that at the level of identity, money is associated with a particularly capable and entrepreneurial person of male gender, and independent or fascinating - depending on whether they work or not - person of female gender. For women, earning, or having, a lot of money is in conflict with her other roles (e.g. mother, wife) and may be a threat to the stability of the couple. The results show that stereotypes generate less willingness to invest and more to manage money on a daily basis for women. The implications of such stereotypes for banks are discussed.

## FACTORS INFLUENCING THE INTENTION TO PURCHASE ELECTRIC CARS

*Roberta Rivero (Dipartimento di Scienze Politiche, Università degli Studi di Napoli Federico II)*

In recent years, automotive industries have invested great resources in order to perfect electric vehicles. Nevertheless, in Italy this market has difficulty to take off, notwithstanding the institutional support. Scholars have tried to identify the factors that influence the intention to buy an electric car. Major drivers are: the cost of the car, the problem of maintenance, and battery life. Nevertheless, little is known about the beliefs which underpin the diffuse consumers' skepticism. Hence, in the current study, 20 semi-structured interviews were conducted with individuals intending to buy a new car and stakeholders. With a theory-driven approach based on the Theory of planned behavior, beliefs related to attitudes, subjective norms and perceived behavioral control have been explored. The content analysis highlighted several key beliefs, such as those related to reliability and autonomy of electric cars. In addition, electric cars are not always considered as vehicles with low environmental impact, because of several issues raised as regards the recycling of batteries and the charging process. Results of the study also support the reliability of a TPB-based model of interview.

## FROM PEOPLE TO DATA: DATAFICATION AS A NEW FORM OF DEHUMANIZATION

*Chiara Sparascio (Università degli Studi di Milano-Bicocca), Alessandro Gabbiadini (Università degli Studi di Milano-Bicocca)*

Quantifying human life through digitalization for profit generation is one of the most economically relevant practices adopted by companies today. This practice, relying on the so-called big-data, has also become known as datafication (Mayer-Schönberger & Cukier, 2013), which can be seen as an expression of modern capitalism extracting raw materials from human beings (Sadowski, 2019). According to *The Economist*, data is now the most valuable resource in the world and some authors have recently introduced the concept of dataism, an emerging ideology consisting of the beliefs of objective quantification as an exhaustive representation of reality and living beings as systems of data processing (Harari, 2015). In the present study, we investigated whether datafication could act as a modern form of dehumanization (Haslam, 2006) by which individuals are considered more as raw data rather than human beings. Further, we also explored preliminary foundations for the operationalization of dataism. A web-survey assessing attitude towards big-data, dehumanization, datafication and dataism as well as negative consequences of datafication, was administered to a sample of adults. Correlation analyses supported preliminary evidence for datafication as a new form of dehumanization.

## IS UNIVERSITY THE RIGHT PLACE FOR ME? FIRST GENERATION STUDENTS EXPERIENCE LOW IDENTITY COMPATIBILITY, LOW IDENTIFICATION, AND LOW ACADEMIC EFFICACY

*Serena Stefani (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia), Maria Paola Paladino (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

First generation students (FGS; students whose neither parent has a degree) have lower chances to earn a college degree compared to continuing generation students (CGS; students with at least one parent with a degree). The present research investigates some psychological barriers that contribute to this attainment gap. Italian first year-university students (N=323) completed a questionnaire in November 2021 that included, among others, also questions to assess students' perception of the prevalence of the education (allowing all students to increase their knowledge) and of the selection (identifying the best students) function in their university. A series of regression analyses were conducted. We found that FGS reported a lower sense of compatibility between their family background and being a university student, lower identification with the university, and less academic self-efficacy. The education and selection function did not predict these outcomes and did not moderate the effect of parental educational status, except for academic self-efficacy. The educational function, but marginally and unexpectedly also the selective function, positively predicted academic self-efficacy, showing that these functions can have a positive effect that goes beyond the family background

## VIRTUAL NATURE IS GOOD FOR YOU: RESULTS FROM A LITERATURE REVIEW

*Annalisa Theodorou (Università degli Studi Roma Tre), Giuseppina Spano (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Gerhard Reese (University of Koblenz-Landau, Germany), Angelo Panno (Università Europea di Roma)*

An increasing number of studies point to virtual reality as a valid alternative for people unable to access nature (e.g., prisoners, patients with limited mobility), but efforts to summarize the available findings are yet limited. In this contribution, we schematize the existing literature and provide a general picture of the state of the art. Findings revealed that virtual nature effectively reduces negative affect, induces restoration, and even sustains positive affect in some cases. Interestingly, the individual preference for a natural environment can be crucial in determining the benefits associated with exposure. Initial results were found also for nature connectedness, cognitive outcomes, creativity, subjective vitality, behavioral intentions, and perceived safety. Our analysis suggests that much more can be done in such a developing area. Further studies may investigate additional interesting outcomes, such as prosocial intentions and aggression. Methodologically, larger studies are needed with adequate power. Identifying evidence-based interventions could be useful for general and specific populations. In conclusion, encouraging results support the spread of such a tool for individuals' well-being.

# Psicologia Sperimentale

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**INVITED TALK: WINNER OF THE COGNITIVE  
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# IN BETWEEN RESPONSE AND ANTICIPATION: THE ROLE OF PROBABILISTIC INFORMATION AND INTOLERANCE OF UNCERTAINTY ON AFFECTIVE PREDICTIONS

*Fiorella Del Popolo Cristaldi (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Emotions have been recently reconsidered as predictive models, constructed by the brain to predict relevant stimuli and promote survival. Nevertheless, the mechanisms underlying the construction of affective predictions remain unclear. More specifically, the role of contextual information and prior experience on the one hand, and the interactions with Intolerance of Uncertainty (IU) on the other hand, have yet to be unraveled. This talk aims to answer these open questions. First, we investigated how contextual information of different predictive value modulates the neural correlates of affective predictions. Second, we explored how prior probabilistic experience impacts on subjective affective experience. Third, we studied the modulating role of IU. Taken together, this work contributes to untangling the dynamics of affective prediction construction at the neural and subjective experience level. Contextual information and prior experience were found to differently influence (depending on their predictive value), and to interact with IU, in shaping the neural correlates and the subjective experience of emotion along the construction of affective predictions. Theoretical contributions to predictive models of emotion, and clinical implications for the prevention and treatment of anxiety disorders are discussed.

# CANDIDATI PREMIO DOTTORATO

## THE ROLE OF PROBABILISTIC INFORMATION ON AFFECTIVE PREDICTIONS: NEURAL AND SUBJECTIVE CORRELATES AS MODULATED BY INTOLERANCE OF UNCERTAINTY

*Fiorella Del Popolo Cristaldi (Università degli Studi di Padova)*

Emotions have been recently reconsidered as interoceptive predictive models, “constructed” by the brain on the basis of contextual information and prior experience, with the aim to predict relevant stimuli or events, and to provide the organism with optimal resources for survival. Nevertheless, the specific mechanisms underlying the construction of affective predictions both at the neural and subjective experience level remain unclear. More specifically, both the role played by contextual information and prior experience on the one hand, and the potential interactions with dispositional characteristics such as Intolerance of Uncertainty (IU), which is considered a trans-diagnostic risk factor for affective disorders, on the other hand, have yet to be unraveled. This PhD thesis aimed to answer these open questions. As a first aim, we investigated how contextual information of different predictive value modulates the neural correlates of affective predictions construction. Second, we explored how prior probabilistic experience affects the construction of affective predictions at the subjective experience level. Third and last, we studied how individual differences in IU impact on the construction of affective predictions as a function of contextual information and prior experience. Taken together, this thesis contributes to untangling the dynamics of affective prediction construction at the neural and subjective experience level. Contextual information and prior experience were found to differently influence (depending on their predictive value), and to interact with IU, in shaping the neural correlates and the subjective experience of emotion along the construction of affective predictions. Thus, this work offers both a theoretical contribution to predictive models of emotion, by better clarifying the mechanisms subtending prediction construction at the neural and subjective experience levels, and potential clinical implications for the prevention and treatment of anxiety disorders, given the trans-diagnostic nature of IU as a risk factor for the development of affective psychopathology.

## THE BINDING OF FALSE MEMORY: BEHAVIORAL AND BRAIN STIMULATION EVIDENCE

*Daniele Gatti (Università di Pavia)*

Memory is one of the most studied topics in cognitive science. Recent perspectives proposed that human memory is not actually a memory system, but rather a predictive system adaptively shaped. However, the role of false memory in such frameworks is not clear. Here, across five studies, we directly investigated the adaptive bases of false memory using the Deese–Roediger–McDermott (DRM) task. Participants were required to study lists of associated words and then to perform a recognition task. In Study 1 we show that participants' memory performance follows a continuous semantic gradient, while in Study 2 we show that semantic memory plays a role in participants' performance even when correctly rejecting semantically related new non-studied items. Then, in Study 3 and Study 4 we adopt an individual differences approach and show that participants' episodic and semantic memory scores differently predict false memory, as well as that participants' reliance on semantic memory when falsely recognizing new words is predicted by theory of mind indexes. Finally, in Study 5 we show that cerebellar perturbation through TMS can over-activate semantic memory traces and thus increase the number of false recognitions. Overall, the studies presented in this Thesis point to the need to build a more global view of memory and of memory ultimate function itself.

## EVERY MOVE YOU MAKE. MOVEMENT CONVEYS SOCIAL INFORMATION DURING INFANCY AND CHILDHOOD

*Elisa Roberti (Università degli Studi di Milano-Bicocca)*

Movement pervades our daily life and affects our social world. From the very beginning of human life, it provides information through the active experience of the body and the environment. This thesis analyzes the contribution of movement in socio-emotional development, from the most fundamental features (i.e., the kinematics) to more complex ones embedded in a multi-personal context. First, we focused on how the kinematics of two emotions (happiness and fear) can be identified by 7- and 10-year-old children to explore whether dynamic features of body language are differently involved in emotions' recognition compared to static ones. Secondly, we considered facial emotional displays. Specifically, we explored whether the observation of faces expressing happiness or anger dynamically activates the sensorimotor cortex (reflected by differential modulation of mu-rhythm desynchronization in the EEG signal) at 7-months of life. Movement was then examined in social exchanges. In this respect, we aimed to investigate whether an action-sound association is perceived as crucial for constructing interactive scripts by 10-month-old infants. Lastly, planning movement and actions toward novel objects is also influenced by social messages provided by others. We then studied how the two actions of holding an object or pushing it away are processed at a neural level by 10-month-olds and whether providing an emotional context in which those actions took place alters their perception. Overall, our findings show that, during development, observing movement from its most basic forms to more complex social exchanges can unveil important social messages about others' emotions and actions in everyday life.

## NOVEL METHODS FOR MEASURING AND MANIPULATING INTEROCEPTION AND ESTIMATING ITS ROLE IN SOCIAL CONTEXTS AND STRESSFUL LIFE EVENTS

*Alisha Vabba (Sapienza Università di Roma)*

Research suggests that interoception, the perception of signals from inside the body (e.g., heart rate, breathing), continuously influences how people think, feel, and behave, ultimately shaping our experience of 'self' and our well-being. The aim of this thesis was to contribute to our understanding of interoception by examining its role in social interactive contexts (Objective 1), and stressful events like COVID-19 (Objective 2), and by contributing to its measurement and manipulation (Objective 3). In the first study (Objective 1), we show that interoception may play an important role in social contexts, as higher cardiac interoception was tied to less susceptibility to social reputation and greater stability in moral decision making in a card game in which participants were tempted to lie for monetary gain. In the second study (Objective 2), we found that self-reported interoception has increased during the COVID-19 pandemic and is linked to psychophysiological health, suggesting it can help to contrast the detrimental effects of the pandemic on well-being. In the final three studies (Objective 3), we contributed to the measurement and manipulation of interoception, by i) developing a task measuring awareness of changes in body temperature which can be used in social and emotional contexts where thermal signals are especially relevant; ii) developing the Exteroceptive Body Awareness questionnaire, a fast and reliable measure of exteroceptive sensibility which can be used to disentangle it from interoceptive sensibility and in clinical research on dysfunctional body awareness; and iii) providing preliminary evidence that transcutaneous auricular vagus nerve stimulation (taVNS) can modulate bodily self-consciousness by enhancing interoception, and potentially be used in psychiatric conditions characterized by altered self-consciousness. Overall, this thesis provides several novel tools for studying interoception in social and clinical contexts and can inspire policies to promote ethical behavior in social settings and the creation of novel therapeutical approaches.

## ACTIVE LISTENING IN SOUND LOCALIZATION: MULTISENSORY AND MOTOR CONTRIBUTIONS TO PERCEIVING AND RE-LEARNING THE AUDITORY SPACE

*Chiara Valzolgher (Università di Trento)*

Humans localize sounds in the environment by interpreting the acoustic signals that reach the ears. In many hearing-loss conditions, these signals are altered and localizing sounds can become challenging. Adaptation mechanisms enable training of sound localization abilities, even in adulthood. In my PhD thesis, I explored the cognitive mechanisms involved in sound localization and I tested the impact of multisensory and motor variables when training acoustic space perception in normal hearing adults, aging people with presbycusis and cochlear implant users. To pursue these aims, I used an innovative virtual reality (VR) approach. In the first two studies, I explored the effects of visual and motor information on sound localization and validated the overall VR approach, in young (Chapter 2) and ageing participants (Chapter 3). In the two subsequent studies, I tested normal hearing people with one ear plugged to demonstrate the effectiveness of a training paradigm based on (1) motor interaction with sound sources (reaching-to-sound), (2) multisensory feedback and (3) active listening (free head-movements during sound emission). I showed that this multisensory training improves performance more than a comparable control condition with limited motor interactions with the sound sources (Chapter 4). Furthermore, I showed that reaching to sound training generalizes toward a different auditory spatial task (Chapter 5). Finally, I showed that training and generalization effects can also be observed in people with deafness who use bilateral cochlear implants (Chapter 6). These results extend current models of acoustic space relearning and propose multisensory-motor training approaches that have the potential to transfer to clinical and applied contexts.



# QUALITATIVE AND QUANTITATIVE ASSESSMENT OF SLEEP IN DAILY-LIFE

*Proponente: Nicola Cellini (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Sleep is an intrinsic condition of life, which occupy up to a third of the human lifespan. Sleep can be considered one of the most important psychophysiological processes for brain function and mental health. Thus, sleep and its characteristics are investigated in different psychological fields and different populations. The sleep characteristics can be assessed using several techniques, from self-reports and sleep logs to actigraphy and laboratory or home-based polysomnography. These techniques can be considered complementary, each of them providing unique information about individuals' sleep features, and they are used to reliably measure sleep in different settings. In this symposium, we will present studies showing how different sleep assessment tools can be used to investigate the impact of sleep on school experiences, motor behaviors, cognitive functions, as well as the bidirectional relationship with psychological distress. Also, we will show that these different tools can be used to assess sleep across the lifespan and in specific populations such as adolescents, prisoners, and people suffering from insomnia.

## TIME COURSE OF MOTOR WAKE INERTIA DISSIPATION ACCORDING TO AGE

*Miranda Occhionero (Dipartimento di Psicologia, Università di Bologna), Marco Fabbri (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Sara Giovagnoli (Dipartimento di Psicologia, Università di Bologna), Martina Grimaldi (Dipartimento di Psicologia, Università di Bologna), Monica Martoni (Dipartimento di Medicina Specialistica Diagnostica e Sperimentale, Università di Bologna), Vincenzo Natale (Dipartimento di Psicologia, Università di Bologna), Lorenzo Tonetti (Dipartimento di Psicologia, Università di Bologna)*

Recently, it has been investigated the time course of motor sleep inertia (mSI) dissipation in an everyday life condition, from middle childhood to late adulthood, through actigraphy. Motor sleep inertia was dissipated in 70 minutes and sleep inertia phenomenon was more marked in younger than older participants. The aim of the current retrospective study was to examine, within the same sample, the time course of motor wake inertia (mWI) dissipation, i.e., the motor pattern in the transition phase from wakefulness to sleep, according to age. To this end, an overall sample of 374 participants (215 females), ranging in age between 9 and 70 years old, was examined. Each participant was requested to wear an actigraph around the non-dominant wrist for one week. The variation of the motor activity pattern of wake-sleep transition according to age was examined through the Functional Linear Modeling (FLM). FLM showed as motor wake inertia was dissipated around 30 minutes after the bedtime. Moreover, lower age was significantly associated with higher motor activity within the last two hours of wakefulness and the first twenty minutes after the bedtime. Overall, this pattern of results seems to suggest that mWI dissipation is mirrored to mSI.

## THE RELATIONSHIP BETWEEN ADOLESCENTS' SCHOOL EXPERIENCE AND SUBJECTIVE AND OBJECTIVE SLEEP QUALITY

*Valeria Bacaro (Università di Bologna)*

The school context has a pervasive influence on adolescents' well-being. This study aimed to evaluate the relationship between different adolescents' school experience (i.e., school tracks, grades, educational identity, social identification with classmates, teachers' support, school belonging, COVID-19 impact) and sleep quality (subjective and objective) in adolescents. For this purpose, a sample of 737 Italian adolescents involved in the IDENTITIES project (mean age: 15.7 years old) wore an actigraph for one week. After the actigraphic assessment, questionnaires on subjective sleep-wake quality and psychosocial variables were administered. Results of regression analyses showed that poor subjective sleep quality was significantly related to being females, higher levels of educational in-depth exploration and COVID-19 impact, while good subjective sleep quality was significantly related to higher levels of educational commitment, social identification with classmates, and school belongingness. Similar results were found for the subjective wake quality, with, in addition, a negative relationship with school grades. No significant relationships were found with objective sleep quality, except for the opposite gender trend (females scored higher on objective sleep efficiency).

## QUALITATIVE AND QUANTITATIVE SLEEP IN A GROUP OF ITALIAN PRISONERS

*Giulia D'aurizio (Università degli Studi dell'Aquila), Laura Mandolesi (Dipartimento di Studi Umanistici, Università degli Studi di Napoli Federico II), Pierpaolo Sorrentino (Istituto di Scienze Applicate e Sistemi Intelligenti, CNR - Institut de Neurosciences des Systèmes, Aix-Marseille Université, France), Daniela Tempesta (Università degli Studi dell'Aquila), Giuseppe Curcio (Università degli Studi dell'Aquila)*

Sleep is a physiological process that plays a pivotal role in cognitive functioning and behaviour regulation. Several studies have reported that exposition to stressors correlates with anxiety and impaired sleep. Prison could be considered a prolonged stressful situation that can trigger the alteration of sleep patterns and can bring out anxiety. In a previous study we observed that in the prison context an increased anxiety level corresponds to an increase in poor sleep quality and insomnia. Results could be reinforced by the actigraphy data. 40 Italian prisoners filled in a set of questionnaires that included the STAI, PSQI, ISI, and KSD. Actigraphy data were collected for two weeks. To evaluate the effects of sleep quality index on actigraphy variables a Multiple Linear Regression analysis was applied. Results showed that the model explains 27% of the variance of WASO score. The model explains 33% of MI, 40% of FI, and 40% of SFI. PSQI also negatively predicted WASO, MI, FI, and SFI respectively. This is the first study in Italy to provide hints on actigraphically recorded sleep in prisoners; more research is needed to correlate these data with cognitive functioning and general well-being in these individuals.

## REDUCING INSOMNIA SYMPTOMS WITH ACCEPTANCE: THE MEDIATION ROLE OF THE PRE-SLEEP AROUSAL STATE AND DISTRESS

*Marco Fabbri (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Laura Catalano (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Luca Simione (CNR, Istituto di Scienze e Tecnologie della Cognizione), Marco Mirolli (CNR, Istituto di Scienze e Tecnologie della Cognizione), Monica Martoni (Dipartimento di Medicina Specialistica Diagnostica e Sperimentale, Università di Bologna)*

It has been proposed a metacognitive model of insomnia explaining the positive effect that mindfulness has on sleep. According to the model, mindfulness can reduce secondary arousal by reducing emotional reactivity to primary sleep arousal. This would prevent the perpetuation of both negative emotions and maladaptive behaviors, reducing the vicious cycle of chronic insomnia. It has been proposed that the acceptance component of mindfulness would exert this beneficial effect more than the monitoring/awareness skill. Assessing the associations between mindfulness skills, pre-sleep arousal state, general distress and insomnia could directly test these hypotheses. 263 participants (191 females; mean age of  $26.79 \pm 7.68$  years) was administered the Philadelphia Mindfulness Scale (PHLMS; for acceptance and awareness), the Depression, Anxiety and Stress scale (DASS-21; for general distress), the Pre-Sleep Arousal Scale (PSAS; for cognitive and somatic arousal) and the Insomnia Severity Index (ISI; for insomnia symptoms). The results showed that only acceptance component of mindfulness predicted the ISI score directly and through a mediated path involving cognitive and somatic arousal and general distress. This study can explain the possible mechanisms linking mindfulness to insomnia.

## FALSE MEMORIES PRODUCTION IN INDIVIDUALS WITH INSOMNIA AND GOOD SLEEPERS: A POLYSOMNOGRAPHIC STUDY

*Serena Malloggi (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze), Francesca Conte (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Oreste De Rosa (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Ilaria Di Iorio (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze), Gianluca Ficca (Dipartimento di Psicologia, Università degli Studi della Campania 'Luigi Vanvitelli'), Fiorenza Giganti (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze)*

False memories (FM) are a possible by-product of the sleep-dependent memory consolidation processes. Up to now, the sleep effect on FM has been addressed only in healthy subjects, neglecting individuals with chronically disturbed sleep. Here we investigate the effect of a retention period spent asleep or awake on FM production in insomniacs and good sleepers. In a mixed design, we administered the Deese-Roediger-McDermott paradigm (DRM) to 17 individuals with insomnia (IN) and 15 good sleepers (GS). In both groups, the encoding phase was followed by an 8-hour retention period spent in PSG-monitored sleep (S) or wake (W). At free recall, we found that the IN group produce more FM in W compared to S, whereas on the contrary the GS group showed more FM in S than in W. Moreover, FM were higher in GS than IN participants in S. Correlation analysis revealed that the number of FM positively correlated with sleep efficiency and negatively with sleep latency and N2%. Our results confirm the role of sleep in FM production and additionally show that FM are produced at awakening as long as the sleep episode is efficient enough. Therefore, it is likely that good sleep quality is required for FM formation, which reflects adaptive memory reshaping.

## RECENT ADVANCES IN PSYCHOMETRICS

*Proponente: Andrea Spoto (Università degli Studi di Padova)*

In the last years it has been observed an increased interest in methodological, statistical, and measurement aspects of research and applications in Psychology. The advances in these areas, that is the advances in psychometrics, are playing an increasing central role in the development of psychological research and practice, and this is not only due to the replication crisis. The aim of this symposium is to present some the most recent and important advances in the psychometric research in Italy with respect to: (i) data analysis methodologies, such as Exploratory Structural Equation Models; (ii) new perspectives in the application of statistical methods to neuropsychology; (iii) new approaches to the statistical modeling of the process of classification by different independent raters; (iv) Markov Chain models for the study of toddlers with and without autism spectrum disorder; (v) the implementation of Virtual Reality in the development of performance tests. The variety of the proposed topics is a clear picture of the extent to which research in psychometrics applies to several different fields, and, at the same time, underlines the importance of good measurement, statistics, and methods for better research in Psychology.

## BEST PRACTICES IN NEUROPSYCHOLOGICAL TEST STANDARDIZATION

*Edoardo Nicolò Aiello (Università degli Studi di Milano-Bicocca), Marcello Gallucci (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca), Giorgio Arcara (IRCCS Ospedale San Camillo)*

Performance-based neuropsychological tests, whether for screening or II-level-examination aims, represent one of the most powerful tool for cognitive diagnostics in brain disorders as applied to clinical practice. Although it is crucial that such instruments come with sound psychometric and diagnostic properties, they often do not meet such requirements, with consequent detrimental impacts on their level of recommendations in clinical settings. The present talk thus presents best-practice standards for standardizing neuropsychological tests, by addressing the following issues: (1) improving the assessment of psychometric (i.e., validity and reliability) and diagnostic properties (i.e., sensitivity, specificity and derived metrics); (2) integrating Classical Test Theory analyses with Item Response Theory ones; (3) new frontiers in norming procedures that account for neuropsychological data features, with a focus on skewness and overdispersion; (4) feasibility from both the examiner's and examinee's point of view; (5) clinical usability, with specific respect to case-control and "case-case" discrimination, responsiveness and reliable changes measurements.



## AN APPLICATION OF EXPLORATORY STRUCTURAL EQUATION MODELING USING THE NOMOPHOBIA QUESTIONNAIRE: ADVANTAGES, DRAWBACKS AND CHALLENGES

*Rossella Bottaro (Facoltà di Scienze dell'Uomo e della Società, Università degli Studi di Enna 'Kore'), Giusy Danila Valenti (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Palmira Faraci (Facoltà di Scienze dell'Uomo e della Società, Università degli Studi di Enna 'Kore')*

Exploratory Structural Equation Modeling (ESEM; Asparouhov & Muthén, 2009) has emerged in recent years as a challenge for psychometric evaluations. Embedding the best principles of both exploratory and confirmatory factor-analytic procedures, ESEM provides a promising compromise between data- and theory-driven approaches. In order to highlight the advantages of using ESEM as an alternative to traditional strategies when evaluating the factorial validity of a scale, we administered the Nomophobia Questionnaire (NMP-Q; Yildirim & Correia, 2015) to 467 participants (53.7% male,  $M_{age}=32.2$ ). Both data-model fit criteria and measurement quality indicators were used comparing CFA and ESEM models. Overall the ESEM models provided better fit indices than the CFA models. Specifically, the bifactor ESEM model with four domain-specific factors revealed the best-fitting model [ $\chi^2=188.321$ ;  $df=100$ ;  $CFI=.987$ ;  $TLI=.975$ ;  $RMSEA=.043(.034-.053)$ ;  $SRMR=.015$ ;  $AIC=32819.633$ ;  $BIC=33358.656$ ;  $aBIC=32946.065$ ] with adequate reliability ( $\Omega=.96$ ). Our results emphasize the value of ESEM, also showing practical implications in advancing our understanding of a novel theoretical conceptual framework, employing a more robust and flexible method for the purpose of validating measures.

## VIRTUAL REALITY FOR THE ASSESSMENT OF EVERYDAY FUNCTION: PRELIMINARY DATA FROM VIRTUAL REALITY ACTION TEST

*Tommaso Palombi (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Andrea Chirico (Dipartimento di Psicologia dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Federica Galli (Università degli Studi di Roma Foro Italico), Francesco Giancamilli (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Fabio Alivernini (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Monica D'Amico (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma), Fabio Lucidi (Dipartimento dei Processi di Sviluppo e Socializzazione, Sapienza Università di Roma)*

Performance-based functional tests for the evaluation of daily living activities demonstrate strong psychometric properties and solve many limitations associated with self/informant-report questionnaires. Virtual Reality (VR) technology, which has gained interest in the healthcare contexts, has the potential to minimize the time-demands associated with the administration and scoring of performance-based assessments. The aim of the presentation is to describe the preliminary results related to the validity of a VR version of the Naturalistic Action Test (NAT), a performance-based measure of subtle functional difficulties. A cross-over trial tested the NAT and its VR version, the Virtual Reality Action Test (VRAT), in two samples of young and older adults. Automated performance measures have been obtained from the VRAT and human coders scored VRAT and NAT for errors and correlations. We will discuss the strong potential of VR, highlighting the psychometric properties of VR immersive measure of everyday function. We will describe the capacity to timely gather relevant information regarding participants' performance data, using an automated scoring system. The VR assessment has the potential to be an alternative screening modality, addressing the limits of current standardized tests.

## USING MARKOV CHAIN MODEL TO COMPARE VISUAL EXPLORATION OF TODDLERS WITH AUTISM SPECTRUM DISORDER AND WITH TYPICAL DEVELOPMENT

*Roberto Vagnetti (Università degli Studi dell'Aquila), Francesco Masedu (Università degli Studi dell'Aquila), Maria Chiara Pino (Università degli Studi dell'Aquila), Marco Valenti (Università degli Studi dell'Aquila), Monica Mazza (Università degli Studi dell'Aquila)*

Autism spectrum disorder (ASD) is a neurodevelopmental disorder that presents atypical visual search strategies. Gaze behavior can be considered as a temporal sequence of fixations on particular stimuli. Describing the eye gaze patterns through a Markov chain could provide important insights regarding the dynamic structure of stimuli's visual exploration in the ASD population. A Markov chain is a stochastic process that, given a set of possible states, indicates the probabilities of moving from one state to another based on the preceding event. The present work aims to describe the visual exploration of 18 toddlers (age range 12-36 months) with ASD using a Markov model and to compare their behavior with toddlers with typical development. Results indicated that Markov chains are suitable for describing and discriminating ASD's visual exploration trajectories.

## LATENT THRESHOLDS MODEL: A NOVEL STATISTICAL MODEL FOR CLASSIFICATION TASKS

*Giuseppe Mignemi (Università degli Studi di Padova), Antonio Calcagni (Università degli Studi di Padova),  
Andrea Spoto (Università degli Studi di Padova)*

Categorical rating scales with two or more ordered categories are widely used in many contexts such as screening and diagnostic assessment, quality control, sport refereeing and emergency. Each classification task is influenced by the threshold of the rater, that is a reference point, or a criterion used by the rater to classify into the ordered categories. Recent research in biostatistics provided interesting attempts to model systematic individual variability in these tasks using GLMM, but did not provide a tailored model for this kind of processes. To fill this gap, in the present contribution we propose a novel approach to the statistical modeling of raters classification process in which each rater evaluates the belonging of an item to a certain category according to several ordered levels. The classification outcomes are described as a function of two independent latent sources of uncertainty: the first one is the extent to which the item belongs to a category; the second one is the individual threshold of each rater. Further developments of this conditional model might regard the improvement of inter-rater agreement estimation, the identification of different types of raters (e.g., conservative vs. liberal), or specific dependency structures among items.

# STUDYING AESTHETICS, FROM SIMPLE TO COMPLEX STIMULI, AND NOT JUST IN THE LAB

*Proponente: Marco Bertamini (Università degli Studi di Padova)*

Interest in the experimental study of aesthetics has a long history, and more recently there have been developments that have linked the study of preference to other areas, such as that of vision or the study of emotions, and also developments in neuroaesthetics. In this symposium we collect experimental contributions on the study of preferences and aesthetic experiences. Within the symposium we will announce the recent formation of a Gruppo di Lavoro AIP, with a few words from the President AIP and the coordinator. Modern art challenges us to reconsider what a work of art is and therefore even if there is something specific to the aesthetic visual experience. Instead of seeing this as a problem, aesthetics, in this sense, is a relevant field for the interaction with many situations and objects, which are not usually considered objects of art. The workshop includes studies of complex dynamic stimuli, dance, and works of art in different contexts (lab, museum, VR). The talks span in terms of methodology from a cognitive approach, psychophysics, and neurophysiology.

## SYMMETRY PREFERENCE, HOW TO EXPLAIN THE CASES IN WHICH IT IS NOT PRESENT

*Marco Bertamini (Università degli Studi di Padova)*

Symmetry is often cited as a key aspect of visual preference, and this is related to the fact that the visual system is tuned to symmetry (high sensitivity and strong neural activation). Symmetry is also found in many ornamentations and in artifacts, starting from palaeolithic time. Moreover, preference can be measured in many ways, including implicit tests. There are very few exceptions when humans show a preference for the less symmetric stimuli, one is the case of experts (Leder et al 2019), the other that of landscapes (Bertamini et al., 2019). Because these are exceptions, they are interesting. However, we found that even when participants prefer the more familiar type of stimuli, which in the case of landscapes require relatively little symmetry, they nevertheless display a bias to prefer symmetry within the subset of landscape images that are artificially symmetrical. Preference is affected by many factors, including prototypicality, but signs of symmetry preference can be found for all stimuli.

## BEHAVIORAL AND NEUROPHYSIOLOGICAL CORRELATES OF THE AESTHETIC EXPERIENCE: FROM THE LABORATORY TO THE MUSEUM

*Stefano Mastandrea (Università degli Studi Roma Tre)*

The importance of laboratory studies, in empirical aesthetics, is largely recognized and have the advantage to allow the control of artwork structural features, and participants' cognitive and affective reactions. However, we believe that research in the museum context, where the authentic aesthetic experience take place, are important and should be encouraged. I would like to present some researches conducted in both contexts, laboratories and museums, in order to give a broad idea of empirical research in aesthetics. The laboratory studies presented aimed to investigate behavioural and neuro-physiological correlates of explicit and implicit aesthetic evaluation; in particular, an fMRI study showed a positive bias evoked by art and the activation of brain regions involved in the feeling of beauty. Museum studies presented include: a psychodynamic oriented approach to Canova's sculpture "Daedalus and Icarus", which reveals that the content represented is associated with Canova personal biography; an observational study of museum visitor's behaviour detected with photographs, about the ways people interact with art. Finally, a museum experimental study which shows that figurative compared to abstract/modern artworks have the capacity to decrease naïve participants' blood pressure.

## E-MOTIONS: ARTISTIC REPRESENTATION OF EMOTIONS WITH HIGH INHERENT DYNAMISM

*Rossana Actis-Grosso (Università degli Studi di Milano-Bicocca)*

We hypothesized that the artistic representation of expressions related to specific emotions, such as anger and fear, embodies a dynamic component and, consequently, conveys a higher inherent dynamism than other emotional expressions. We dubbed these emotions “e-motions”, to underline the relation with their motion component. I will present two separate experiments in which this hypothesis has been tested with typically developed- (Exp.1) and Autism Spectrum Disorders- (ASDs, Exp.2) -young adults, who have been presented with twelve human figures (derived from eleven static artworks) that convey different emotions in different proportions. Participants were asked to rate perceived dynamicity of stimuli on a 7-point Likert scale (Session 1) and to rate each stimulus for eight different possible emotions (Session 2). As expected, we found that some emotions (i.e., disgust, anger and fear) are positively related to the dynamicity attributed to the artworks: those emotions are the more sudden ones and thus the more ‘unstable’, in line with the representation of motion in art, which is often achieved by portraying unstable poses. Some interesting differences between the two experiments will be discussed, suggesting a possible different fruition of visual artwork by ASDs population.



## SPATIOTEMPORAL COMPLEXITY IN DANCE AESTHETICS

*Andrea Orlandi (Dipartimento di Psicologia, Sapienza Università di Roma), Matteo Candidi (Dipartimento di Psicologia, Sapienza Università di Roma)*

Dance represents a relatively novel, still ideal framework for neuroscientific studies on body and movement representation and aesthetic appreciation. The neuroscientific study of dance is challenged by its intrinsic complexity, including the number of sub-movements within a movement sequence, the timing of such a sequence, the number of people reproducing a dance piece, and their relative postures. When complexity is quantified as movement timing, for example, a preference is shown for varied, still predictable movements and individuals moving synchronously. We currently unravelled the role of interpersonal posture complexity in dance aesthetics by assessing the impact of several visuospatial attributes on the subjective evaluation of interacting body dyads. We digitalized the kinematics of a couple of dancers and created 3D images of non-symbolic dyadic dance-like postures that varied in the shared interpersonal space, centre-of-mass distance, orientation, positioning, and symmetry. We show that the aesthetic appreciation of dance-like interactions seems to depend on a mosaic of visuospatial features (e.g., shared interpersonal space) as well as on observers' focus on low-level (e.g., symmetry) vs high-level (e.g., emotion, meaning, interest) dyads' attributes.

## THE MICHELANGELO EFFECT: ART IMPROVES THE PERFORMANCE IN A VIRTUAL REALITY TASK

*Marco Iosa (Sapienza Università di Roma)*

The vision of an art masterpiece is associated with brain arousal by neural processes occurring quite spontaneously in the viewer, that may even elicit a response in the motor areas of the observers (Adolphs et al., 2000; Freedberg and Gallese, 2007). In the neurorehabilitation of patients with stroke, art observation has been used for reducing psychological disorders, and creative art therapy for enhancing physical functions and cognitive abilities. We developed a virtual reality task allowing patients, by moving their hand on a virtual canvas, to have the illusion of painting some art masterpieces. Twenty healthy subjects and four patients with stroke performed this task and a control one in which they simply coloured the virtual canvas. The art condition was performed by 20 healthy subjects with shorter trajectories and with a lower perception of physical demand ( $p < 0.05$ ). Then, only patients treated with artistic stimuli showed a reduction in the erroneous movements ( $p < 0.05$ ). In analogy to the Mozart effect of classical music, we called this effect of reducing errors and perceived fatigue thanks to the aesthetical experience of an artistic paint as Michelangelo effect.

## SUBCLINICAL COGNITIVE AND PSYCHOPHYSIOLOGICAL CHEMOSENSORY DYSFUNCTION OF LONG COVID

*Proponenti: Sara Invitto (Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali, Università del Salento), Marina De Tommaso (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

Millions of people in the world who recovered from COVID-19 have been experiencing persistence of symptoms (e.g., fatigue, shortness of breath, cough, joint, chest or muscle pain, dizziness, hyposmia, depression or anxiety, memory, concentration or sleep diseases) known with the collective term of Long Covid (LC). While pulmonary complications in patients affected by SARS-CoV-2 infection have received the most attention, the neuropsychological and psychophysiological consequences are not to be underestimated as they produce disabling and persistent outcomes. This symposium will deal with the identification of possible perceptive, cognitive and psychophysiological deficits due to COVID-19 associated with olfactory, gustatory and chemosensory alterations. The Symposium will be focused on research topics linked to anosmia, disosmia and ageusia investigated through electrophysiological and hemodynamic alterations. Furthermore, it will be focused on the characterization of LC symptomatology prevalence (e.g., perceptive and emotional). The studies presented are case-control studies, demonstrating with different techniques and experiments that chemosensory diseases, in LC patients, can be traced back to neuropsychological impairments that need to be further investigated.

## OBSERVATIONAL STUDY OF FRONTAL BRAIN FUNCTION INVOLVEMENT IN POST-COVID-19 PATIENTS

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The SARS-COV-2 is an infection with a wide range of clinical manifestations. Nearly 40-60% of patients develop a loss of sense of smell, and lots of them continue to complain of persistent symptoms, most of which are neurological like memory problems and attentional deficits. Indeed, patients with previous SARS-CoV-2 infection may have residual olfactory, gustatory and prefrontal and limbic lobe functional alterations. The aim of this study is to correlate cognitive, neurophysiological, and psychophysiological findings with subjective alterations in smell and taste at the time of onset of COVID-19 symptoms. Using fNIRS data acquired during the resting state, the P3a odd ball task paradigm and the Stroop test, we analyzed the metabolic activity in two clinical groups (25 covid patients and 11 controls). Performing a T-Test for each condition, we identified statistically significant differences in cerebral hemodynamic activity (p value <0.05) between the two clinical groups during the execution of P3a odd ball task and the Stroop test. In addition, clinical scores to obtain a self-assessment of smell and taste, such as the visual analog scale (VAS) and the Self-reported Mini Olfactory Questionnaire (SelfMOQ), were used to investigate their correlation with the metabolic activity.

## DIFFERENT CHEMOSENSORY AND ANXIETY SYMPTOMATOLOGY BETWEEN DELTA ANDOMICRON VARIANT

*Sara Invitto (Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali, Università del Salento),  
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Ilaria Bruno (Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali, Università del Salento)*

The Omicron variant, compared to the Delta, was framed for the first time in a paper of November 2021, but the characteristics connected to this last variant have not been fully investigated from the chemosensory point of view. This study investigated phenomena related to anxiety and stress, cognitive self-assessment, olfactory perception, and gustatory perception in the first and the second pandemic phase. A behavioral olfactometric assessment based on the Sniffing Test (SST), the Body Perception Questionnaire test, the Perceived Stress Test, and a variation SST for comparative gustatory self-assessment (perception of taste and perceived intensity of flavors) was administrated to 205 patients with delta variant and 88 patients with omicron variant, from different Italian regions. A subgroup was assessed through a chemosensory evaluation, based on SS, during EEG evaluation. The two groups are significantly different both in terms of olfactory perception and gustatory perception. The chemosensory perceptual intensity seems to have increased in the omicron condition compared to the delta condition. The cognitive self-assessment on stress and body perception, on the other hand, does not seem to highlight differences between the two variants. The same chemosensory trend was found in EEG rhythms linked to SST stimulation.

## HYPOSMIA IN LONG COVID PATIENTS

*Francesco Fantin (Università degli Studi di Padova - Ospedale di Treviso), Giacomo Spinato (Università degli Studi di Padova), Sara Invitto (Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali, Università del Salento)*

With the spread of SARS-CoV-2 also problems of taste and smell interest a large part of the population. These symptoms are not limited to the acute phase, but can persist over time in the so called "long covid". Our study considered EEG rhythms in function of Hyposmia/Anosmia. 25 patients and 25 controls were assessed through olfactometry using Sniffin' sticks and fibroscopy. Five odorants among those of Sniffin' sticks were administered to the patients. For each odorant, the subjects had one minute of EEG recording in resting state condition and with the odorant, plus one minute of wash out. We found that the 36% of patients with subjective hyposmia had an olfactory deficit, when assessed through the Sniffing Stick test. In the assessment of psychological well-being (WHO-5 scale) Long Covid patients had worse results. A difference emerges for the odor effect at the administration of the various odorants ( $p = 0.004$ ) vs controls. The delta rhythm, that best characterizes a response to the odorant, was more sensible to identify a different between group ( $p = 0.040$ ) and between the electrodes ( $p < 0.001$ ). Furthermore, gamma rhythm, connected to stress, was more active in Long Covid group.

## OLFACTORY, GUSTATORY, AND CHEMESTHETIC DYSFUNCTION IN COVID-19 PATIENTS: A CASE-CONTROL STUDY

*Riccardo Marzolino (Università di Trieste), Paolo Boscolo Rizzo (Università di Trieste), Giancarlo Tirelli (Università di Trieste)*

In this study we estimated the prevalence of psychophysical olfactory, gustatory and chemesthetic impairment 1 year after infection with SARS-CoV-2, considering the prevalence of chemosensory deficits in healthy population. This study included 100 patients with COVID-19 (mildly symptomatic form) who underwent isolation between March and April 2020. Controls (matched by gender and age) were regularly tested and always tested negative. Chemosensory function was studied by a psychophysical evaluation which included olfactory and gustatory function. Differences in chemosensory parameters were evaluated by Fisher's test or Kruskal-Wallis test. The evaluation occurred after a median of 401 days from the positive swab for SARS-CoV-2. The orthonasal olfactory assessment identified that 46% of cases and 10% of controls had olfactory dysfunction, with 7% of cases being anosmic. The evaluation of the gustatory function revealed a deficit in 27% of cases against 10% in the controls. Trigeminal and nasal sensitivity was significantly lower in cases. Persistent chemosensory impairment has been associated with increased emotional distress and depression. More than a year after the onset of SARS-CoV-2 disease, cases showed a higher prevalence of olfactory, gustatory, and chemesthetic disorders than controls.

## ELECTROPHYSIOLOGICAL AND VOLABOLOMIC APPROACH TO LONG COVID

*Andrea Mezzatenta (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara)*

The SARS-CoV-2 caused the actual pandemia, induces airway and pulmonary symptoms and, in severe cases, leads to respiratory distress and death. Furthermore, the persistence of symptoms, shortly termed long Covid, after the acute infection is of dramatic actuality. Although CoViD-19 is primarily a respiratory disease, many patients exhibit extra-respiratory symptoms of various severity. Among these, a sudden loss of olfactory function in infected individuals were reported worldwide. It is considered a cardinal symptom of disease because the olfactory system has been hypothesized to be the portal of entry of SARS-CoV- 2 in the CNS. Various hypotheses have been proposed such as conductive loss due to obstruction of the olfactory cleft, alteration of OSN neurogenesis, and secondary CNS damage related to edema in the olfactory bulb. The CNS neuroinvasion could explain the neurological symptoms in long Covid. To investigated early effects of virus we perform olfactometric investigations in anosmic patients after six months of disease. We use two electrophysiological objective techniques to evaluate olfactory threshold and uni- and cross-modal (trigeminal and gustative) olfactory perception by using OERP and Volabolomic e-nose recording. Here, we report the interactions of SARS-CoV-2 with the olfactory system and its pathophysiological mechanisms.



# THE MULTI-FACETED WORLD OF THE EMOTION REGULATION: EVIDENCE FROM NEUROSCIENCE, COGNITIVE AND CLINICAL PSYCHOLOGY

*Proponenti: Tiziana Quarto (Università degli Studi di Foggia), Tiziana Lanciano (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

Emotion regulation refers to the set of processes or activities by which individuals can track, evaluate, and influence the nature, course, and expression of emotions. It allows the individuals to adapt their impulses, desires and actions to both the society norms and the multiplicity of their personal interests. While most of these regulatory processes are automatic and already present in childhood, the individual may refine them through life experience, self-monitoring, or psychotherapy. However, the encountering with the environment may also lead to emotion dysregulation. This is the case of traumatic events, such as COVID-19 pandemic. On the other hand, the emotion dysregulation may be a constitutive part of the individual, thus leading to dysfunctional behavior. This is the case of personality disorders, such as psychopathy. Moreover, ER processes interact with a multiplicity of factors such as cognitive processes (e.g., working memory) or the individual sensitivity to reward and punishment, suggesting a reciprocal relationship with other psychological domains. In the present symposium all these aspects are treated with the aim to unveil the multi-faceted world of the ER processes and to integrate the most recent evidence from neuroscience, clinical and cognitive psychology.

## PSYCHOEDUCATION REDUCES ALEXITHYMIA AND MODULATES ANGER EXPRESSION IN A SCHOOL-SETTING

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Bullying and violence are relevant issues in the school-setting and negatively impact on students' well-being and mental health. Psychoeducation and anti-bullying programs may prevent violence among students addressing emotional expression and regulation, alexithymia and anger. We describe the impact of a psycho-educational intervention delivered to 90 males and 101 females school-children (N=191), aged 12-14 years old, and aimed to improve their emotional recognition and regulation as well as to reduce alexithymia in order to prevent aggression and bullying episodes. A psychological assessment has been performed before (T0) and after (T1) the intervention including the TAS-20, the STAXI, EQ and the ERQ. Females have shown higher levels of alexithymia at baseline whereas other characteristics (Anger, Empathy Quotient and Emotional Regulation) did not differ among sex-groups. The psychoeducational program significantly increased the Empathy Quotient, the Emotional Regulation reappraisal and the assertive anger expression; alexithymia significantly decreased after the intervention in all the sample.

## PSYCHOSOCIAL CORRELATES OF THE COVID-19 FROM A GENDER-BASED PERSPECTIVE

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The COVID-19 is entailing long-term consequences on population health and welfare. Those who contracted the coronavirus may have suffered from both physical and mental health issues requiring tailored intervention. The investigation yielded significant gender differences in post-traumatic stress symptoms, depression, and representation of interpersonal distance (IPD), evaluated through the IES-R, the BDI-II, and the IVAS, in 86 participants. Those who reported having experienced the most intense post traumatic symptoms also presented a greater mood deflection and, more specifically, within the clinical group women obtained the highest scores on both scales. Women reported higher IES-R and BDI-II scores compared to men. Our results also showed an effect of COVID-19 on IPD with a tendency of disease-experienced individuals to increase their preferred IPD from adults, children, and elderly people. Regarding gender differences in mood and proxemic behavior, a correlation between depressive symptoms and PTSD and a further correlation between PTSD and greater IPD were found in women from both clinical and control group. These findings may contribute to a better understanding of gender-based implications of the current pandemic, leading to the development of integrated strategies.

## NEUROBIOLOGICAL CORRELATES OF PSYCHOPATHIC TRAITS IN THE GENERAL POPULATION

*Tiziana Quarto (Università degli Studi di Foggia), Aurora Bonvino (Università degli Studi di Foggia), Tiziana Lanciano (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Antonietta Curci (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

Psychopathy is a personality disorder characterized by a profound emotion dysregulation that leads to a constellation of interpersonal and behavioral dysfunctions. Far from being a unitary construct, psychopathy has been typically divided in two subtypes: Type 1 characterized by dysfunction of basic emotional processes such as emotion recognition and empathy; and Type 2 characterized by antisocial behavior and impulse control deficits. As any other pathologies, psychopathic traits exist to varying degrees along a continuum, thus living also in the general population. In the present study, using a healthy sample of 1003 subjects by the Human Connectome Project, characterized by a large number of psychological and neurobiological variables, we have 1) selected all the psychological variables conceptually related with the psychopathic construct; 2) conducted a factorial analysis with all the selected psychological variables; 3) carried out Pearson's correlation between the psychopathic traits emerging from the factorial analysis and morphological brain features. Results of the factorial analysis replicated the existence of Type 1 and Type 2 psychopathy, while the Pearson's correlations revealed different morphological abnormalities associated with these 2 psychopathic subtypes.

## FALSE MEMORIES FOR EMOTIONAL EVENTS IN TYPICALLY DEVELOPING CHILDREN AND CHILDREN WITH AUTISM SPECTRUM DISORDER

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Emotional events typically lead to better memories than mundane events. In adults, working memory (WM) interacts with emotion in affecting false memory. To investigate this in children, we administered the Emotional False Memory Paradigm - eliciting false memories for negative, positive, and neutral events - and a WM task to 98 typically developing (TYP) children (first, third, and eighth- graders). Regardless of age, emotion influenced false memory, such that positive events protected against distortions. Furthermore, WM interacted with valence, such that children with higher WM produced fewer negative false memories. In a second study, a group of TYP children and a group of children with autism spectrum disorder (ASD) were compared on false memory production. The ASD group made more false memories on negative and positive, but not neutral, lures compared to TYP: viewing emotional stimuli made it harder to discriminate seen and unseen events. For the ASD group, task performance was associated with compulsive and ritualistic behaviors. Overall, the integration of cognition and emotion in ASD is altered and even in TYP children, individual differences in higher cognitive abilities (WM) are fundamental in helping children to discriminate between true and false memories.

## PUNISHMENT AND REWARD SENSITIVITY AND DAILY EMOTION REGULATION IN A LOW-MIDDLE SES COLOMBIAN ADOLESCENT SAMPLE

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People who are sensitive to punishment typically have a negative response to punishment, high attention to punishment-relevant cues and a strong tendency to avoid punishment; whereas people who are sensitive to reward typically have a positive response to reward, high attention to reward-relevant cues and a strong tendency to approach reward (Davis & Fox 2008; Gray, 1970). Feedback sensitivity also affects peoples' emotionality and emotion regulation abilities (Dennis, 2007). There is a dearth of research on these factors together, especially during adolescence. This study examined the associations between feedback sensitivity (BIS/BAS Scale, Carver & White, 1994) and emotion regulation with a low-middle SES sample of 244 adolescents from Colombia (57% girls, Mage =15,40, DS= 1,69). For 15 days, adolescents were prompted via mobile-phones to respond to questions about their emotions, and whether they were using specific emotion regulation strategies (Rothenberg et al., 2019). Using path analysis, it emerged that low reward sensitivity and high punishment sensitivity were associated with daily anger and sadness, and daily anger and sadness dysregulation. These findings contribute to the discussion on the role of adolescents' individual differences on their adjustment.

# DIFFERENT APPROACHES TO MCI CHARACTERIZATION: NETWORK ANALYSIS, MACHINE LEARNING AND CLINICAL FRAMEWORKS

*Proponente: Laura Veronelli (Casa di Cura Privata del Policlinico Milano)*

In the field of neurodegeneration, attention is focused on early and precise classification of individuals with Mild Cognitive Impairment (MCI), detection of predictors of conversion to dementia and identification of reliable protective factors, as education and occupation in terms of cognitive reserve. The symposium aims to bring together recent approaches to neurodegenerative diseases, with a focus on neuropsychological assessment and data analysis, particularly in subjective cognitive decline and MCI phases. In the Artificial Intelligence field, Machine Learning uses non-linear methods to extract reliable predictors and automatically classify different clinical phenotypes. Network analysis addresses complex aspects of the neuropsychological assessment through large-scale investigations, unveiling dynamic aspects of the cognitive functioning, which may not emerge using classical error scoring. Undoubtedly, the clinical experimental approach permits to investigate new theoretical hypothesis on cognitive functioning, enriching patient characterization and phenotypes. From its own perspective, each method helps to provide specific data that could then be integrated into a more complex framework, with precious implications for disease prevention and management.

## A NETWORK APPROACH TO THE COGNITIVE ASSESSMENT OF MCI, AD AND SUBJECTIVE MEMORY CONCERN

*Daniele Romano (Università degli Studi di Milano-Bicocca)*

In recent years, there has been a focus on the early and precise classification of individuals with Mild Cognitive Impairment (MCI). Modern approaches employ advanced statistical methods for better characterisation and prognosis of individuals from subjective memory concerns (SMC) to the eventual development of dementia. This contribution focuses on using a multivariate network analysis approach to characterise the organisation of cognitive functioning in people with different memory impairments. We adopted a Gaussian Graphical Model (GGM) to estimate the network of test performances in three relatively large samples: SMC (N=155), MCI (N=242), and patients with Alzheimer's Disease (AD, N=241). Results show that the diagnosis is a peripheral node (i.e., it has little influence on the other nodes, namely the tests) as shown by the low closeness, low betweenness and high clustering coefficients, suggesting that the core of the network is consistent between the three conditions. However, it also has high strength, determined by many small associations with the other nodes, suggesting that changes induced by the MCI have a specific impact on cognitive functioning that goes beyond a mere test performance drop.



## ARTIFICIAL INTELLIGENCE, LANGUAGE AND NEUROPSYCHOLOGICAL MEASURES IN ALZHEIMER'S DISEASE

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The global rise of Alzheimer's disease (AD) and other neurodegenerative disorders calls for equitable and scalable approaches to identify and characterize patients. Cognitive and linguistic tools (including standardized batteries, experimental tasks, and automated speech analysis) are critical, low-cost resources to capture early disease markers. Artificial intelligence, in particular machine learning (ML), has been established as one of the more powerful approaches to extract reliable predictors and automatically classify different AD phenotypes. We analyzed the contribution of ML and neuropsychological measures for the automated classification of AD patients and the prediction of MCI conversion to AD-type dementia. The advantages and issues that should be taken under consideration for translating these approaches into reliable clinical studies are discussed. ML applied to language/cognitive measures can automatically classify AD patients, even at an early stage of the disease. This brings several advantages, such as the development of more objective and efficient batteries for improving the early diagnosis of AD. Future studies should empirically test the combination of methodological features necessary to improve patients' classification also at the preclinical stages.

## A LONGITUDINAL STUDY WITH SUBJECTIVE COGNITIVE DECLINE INDIVIDUALS: WHAT MODULATE TRAJECTORIES OF COGNITIVE PROFILE

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Several variables modulate cognitive changes over time. A retrospective and longitudinal study quantified the contribution of education and occupation (ISCO-08) as cognitive reserve. 3081 participants with suspected cognitive decline were evaluated with a neuropsychological battery and part of them were retested two times. At baseline (T1) 507 showed an unimpaired profile (Subjective cognitive decline, SCD), 584 were mildly impaired, (mild neurocognitive decline) and 1980 were severely impaired (major neurocognitive decline). From T1, 543 were assessed a second time (T2), and 125 a third time (T3). Based on their initial performance, participants were classified as resistant or declining depending on whether they maintained or worsened their profile. At baseline, all individuals showed education and occupation as best predictors of performance and across assessments the resistant showed higher education and occupation than the declining. The SCD who fall in the resistant group at T2 and T3 showed higher education and more complex occupation. Education and occupation showed a role in protecting from decline. This effect is visible in mild and major neurocognitive disorder individuals, and also in SCD who are fragile healthy elderly at risk of pathological aging during time.

## THE PREDICTIVE ROLE OF IMMEDIATE MEMORY, EXECUTIVE AND SOCIAL FUNCTIONING IN THE DIAGNOSIS OF MILD COGNITIVE IMPAIRMENT AND MAJOR NEUROCOGNITIVE DISORDER

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Mild Cognitive Impairment (MCI) and Major Neurocognitive disorder (M-NCD) are clinical conditions that can be discerned by the type of neuropsychological indices that can both characterize and predict their onset and development. Accordingly, the scores of a 13-test battery of 302 MCI, 77 M-NCD cases, and 166 healthy controls (HCs) were examined through MANOVA and Multinomial logistic regression that investigated the predictivity of cue sensitivity (FCSRT-ISC), executive functions (backward span; CDT), and social cognition (SET) in the different diagnoses. Statistical significance was set at  $p < .05$ . Multinomial regression showed three predictive indices for MCI vs. HCs: the higher the scores at FCSRT-ISC, backward span and SET, the lower the chances of fitting MCI profile. Likewise, in the M-NCDs vs- HCs model, the higher the scores at FCSRT-ISC, backward span and CDT, the lower the chances of fitting M-NCD. MANOVA with Diagnosis as independent variable and FCSRT-ISC, backward span, CDT, and SET as dependent variables revealed that diagnosis affects all dependent variables (all  $< 0.006$ ). Our results could be important to better define the domains that could better predict the various stages of dementia.

## VISUAL FOCAL ATTENTION MECHANISMS IN MILD COGNITIVE IMPAIRMENT

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Simultanagnosia, one of the cognitive features of Posterior Cortical Atrophy (PCA), has been attributed to a deficit in the flexibility of focal attention that prevents patients from adapting the attentional window to the stimulus features. Since PCA can be often associated with Alzheimer disease pathology, the present study investigated focal attention modulation in a group of Mild Cognitive Impairment (MCI) individuals (amnestic subtype). Participants were asked to detect a central “T”, cued by red dot, small square, big square or no cue, and to name the big or the small letter in Navon incongruent figures. Moreover, an assessment of cognitive domains (attentive, praxic, visual and mnestic) has been carried out. Results showed that, while matched controls responded faster to targets cued by small squares as compared to big ones (focal attention index), this effect was not replicated in the MCI group. Furthermore, their scarce adaptation of the focal window correlated with object decision performance (VOSP subtest). Accordingly, at the Navon test the MCI group showed slower responses to the global level than to the local one, compared to controls. In conclusion, the present study sheds new light on the possible involvement of visuo-perceptual and attention mechanisms in MCI.

# MY BODY IN ACTION: HOW THE SENSE OF AGENCY AND OWNERSHIP SHAPE BODILY SELF-AWARENESS

*Proponente: Gerardo Salvato (Università di Pavia)*

Bodily self-awareness involves the feeling of owning a body (Sense of Ownership, SoO) and the agency over our actions (Sense of Agency, SoA). We will present novel evidence on the behavioural and neurophysiological characterization of the SoO, SoA and their interaction. A growing body of research proves the importance of body temperature in maintaining a coherent SoO. Salvato will present evidence from healthy and pathological individuals showing the relationship between SoO and thermoregulation. The integration between internal and external signals also plays a role in building the SoO. Scandola will illustrate how the interruption of the bridge between the self and the external world occurring in spinal cord injury modulates the SoO. Acting with our body in the environment gives rise to the subjective awareness of initiating, executing, and controlling our actions. Zapparoli will provide evidence on the neurophysiological basis of the SoA and its neural convergence with the SoO. Marotta will provide evidence of this interaction using non-invasive brain stimulation and multisensory illusion paradigms in healthy and pathological populations. Lastly, we will propose a neurocognitive model of interaction between the SoO and SoA.

## THE ASSOCIATION BETWEEN BODY OWNERSHIP AND BODY TEMPERATURE: EVIDENCE FROM HEALTHY AND PATHOLOGICAL POPULATIONS

*Gerardo Salvato (Università di Pavia)*

The sense of body ownership derives from the multisensory integration of external and internal information. In particular physiological signals, such as body temperature, may play a crucial role. I will present evidence from healthy individuals in which the temporary interference with the sense of body ownership through behavioural manipulation (i.e., Mirror Box Illusion) correlates with diminished limb temperature. This finding is corroborated by evidence from pathological models of body ownership. I will demonstrate how right-brain lesions inducing Disturbed Sensations of limb Ownership (DSO) more frequently provoke thermoregulatory alterations, that is, lower temperature in the affected body regions. Moreover, in the absence of a brain injury, the altered sense of body ownership leading to a desire to amputate a healthy limb (i.e., Body Integrity Dysforia - BID) may be associated with specific thermoregulatory responses involving the affected body regions. The presented evidence supports the importance of thermoregulatory signals in maintaining a coherent sense of body ownership.

## THE BODY SILENT: BODY OWNERSHIP IN SENSORI-MOTOR DISCONNECTION

*Michele Scandola (Dipartimento di Scienze Umane, Università di Verona)*

A spinal cord injury might cause sensori-motor disconnections below the site of the lesion, also causing neuroplastic modifications in our brain. One of the most relevant characteristics of Body Ownership (BO), common to most definitions, is that it has a multisensory basis, where multiple sensations temporally and spatially converge towards integration, building BO – namely, the sensation that the body is mine. But what happens to BO when multisensory integration is not possible? When tactile, proprioceptive, thermal, pain – most of somatic sensations – are not present? This fascinating research question was studied by means of several experimental paradigms. In this talk the main results from the scientific literature, with additional unpublished results, will be discussed, showing that the BO is still present, even if showing neuroplastic changes and organised according to a somato-topic organisation: different sense of ownership manifestation in the spared v. the paralysed body parts.

## HOW THE EFFECTS OF ACTIONS BECOME OUR OWN: THE SENSE OF AGENCY AND ITS NEURAL CORRELATES IN HEALTHY AND PATHOLOGICAL POPULATIONS

*Laura Zapparoli (Università degli Studi di Milano-Bicocca)*

Every day, we do things that cause effects in the outside world with little doubt about who caused what. To some, this sense of agency (SoA) derives from a post-hoc reconstruction of a causal relationship between an event and our preceding movements (reconstructive hypothesis). Others propose that the SoA originates from prospective comparisons of motor predictions and their effects (constructive hypothesis). To test these alternative models, we devised a temporal judgment task that allowed us to measure the intentional binding phenomenon, an implicit measure of the SoA, in healthy and pathological populations. Using fMRI, we found that in healthy subjects the SoA is associated with the activity of a brain network including the pre-SMA and dorsal parietal cortex. rTMS affected the SoA only when delivered over the pre-SMA. Our findings show that the activity of brain regions involved in action at the stage of its planning is important for the manifestation of an implicit SoA. These results, together with data collected in pathological populations affected by movement disorders, make the constructive hypothesis of the SoA more likely and complete the circle of a conceptual validation of the implicit SoA as a phenomenon anchored to the functioning of the motor system.



## NEURAL AND BEHAVIORAL EVIDENCE OF THE INTERPLAY BETWEEN AGENCY AND BODY OWNERSHIP

*Angela Marotta (Dipartimento di Neuroscienze, Biomedicina e Movimento, Università di Verona)*

Voluntary movements are accompanied by the experience of controlling one's own movements (sense of agency) and the feeling that the moving body part belongs to one's self (sense of ownership). In a recent tDCS study we tackled the causal role the premotor cortex (PMc) and the cerebellum in agency and body ownership. By using the moving rubber hand illusion, we found a specific causal contribution of these two brain regions in bodily self-perception during voluntary movements, with the PMc mainly involved in action awareness and the cerebellum in proprioceptive adaptation of body position in space. In a second study we investigated proprioception in functional movement disorders (FMD), a condition characterized by abnormal sense of agency. We devised a position matching task in which participants had to match the position of one arm with their contralateral arm. Patients were significantly less accurate than healthy controls, thus suggesting abnormal central processing of proprioceptive information in FMD. These proprioceptive dysfunctions may underlie alterations in sense of agency and may play a role in the pathophysiology of the disease. Using different approaches, these studies provided new evidence on the mechanisms underlying the interplay between agency and body ownership.

# READING AND SPELLING PROCESSES AND LEARNING DISORDERS: EVIDENCE FROM A SHALLOW ORTHOGRAPHY LANGUAGE

*Proponente: Maria De Luca (IRCCS Fondazione Santa Lucia)*

This symposium aims to present the state of the research on reading and spelling processes in typically developing children and in children with dyslexia in a shallow orthography language such as Italian, focusing on the main research lines developed by prof. Zoccolotti and his collaborators in the last decades. The investigation on the mechanisms and the processes involved in the difficulties observed in children with specific learning disorders was carried out by this research group from different perspectives. Several works were aimed to study domain-specific mechanisms involved in reading and writing: from the examination of eye movements and vocal reaction times, to the identification of the grain size of reading units, as well as the study of the role of distributional features of the language in detecting regularity in spelling. In parallel, an integrated approach was proposed, aimed at modeling the difficulties encountered in different learning disorders, by referring to domain-general processes and taking into consideration the comorbidity between disorders. Overall the findings have demonstrated important implications for designing treatment protocols as well as defining optimal compensatory strategies.

## LEARNING TO READ IN A SHALLOW ORTHOGRAPHY LANGUAGE: DEVELOPMENTAL DIFFERENCES IN THE GRAIN SIZE OF READING UNITS AND IN READING STRATEGIES

*Daniela Traficante (Università Cattolica del Sacro Cuore)*

According to the Psycholinguistic Grain Size Theory by Zigler & Goswami (2005), children learning to read a shallow orthography language are likely to rely on small grain size units, such as single letters, as the consistency of the Grapheme-to-Phoneme Conversion (GPC) rules of their language allow them to reach a high level of accuracy irrespective to the activation of whole-word representations. In line with this theory, the development of a reading strategy based on the lexical route might not be required in Italian, as the non-lexical route is not resource demanding and can successfully contribute to the pronunciation of the most words. However, the narrative review presented in this contribution shows that even Italian children are prone to identify, within a letter string, reading units larger than single graphemes, and can develop lexical representations, according to the distributional properties of their language. This pattern of results offers a complex view of reading and some useful clues for treatment of reading difficulties.

## IS IT POSSIBLE TO IDENTIFY A CORE DEFICIT IN DEVELOPMENTAL DYSLEXIA?

*Pierluigi Zoccolotti (Sapienza Università di Roma - ISTC Istituto di Science e Tecnologie della Cognizione, CNR, Roma - IRCCS, Fondazione Santa Lucia, Roma)*

There is a growing tendency to interpret specific learning disorders (SLD) from a multifactorial rather than a single cause perspective. This approach stems from studies on comorbidity between SLD and between SLD and other developmental disorders (Pennington, 2006). In this logic, proposed multidimensional interpretations reject the idea that one can isolate a “core deficit” in SLD. However, even in this perspective, it is possible to think that there is a core deficit (competence) associated with other difficulties of a different level (e.g. performance). A line of research is described following this logic and attempting a characterization of the “core” in developmental dyslexia (DD) net of “task-specific” components. This approach has been based on models (such as the DEM of Myerson et al., 2003) that allow for the identification of global components in a given disorder while taking into account the effect of over-additivity (i.e., more difficult conditions produce larger group differences regardless of the characteristics of the specific experimental conditions). A number of studies are illustrated that indicate how this approach allows the identification of the ‘domain’ of action of the reading disorder by offering a heuristic on the possible core deficit in DD.

## “TRACES OF EYE MOVEMENTS”: EYE TRACKING IN THE STUDY OF READING IN THE ITALIAN LANGUAGE

*Maria De Luca (IRCCS Fondazione Santa Lucia), Marialuisa Martelli (Dipartimento di Psicologia, Sapienza Università di Roma)*

As part of the study of reading, one of the research paths we have undertaken was based on the monitoring of eye movements using the eye tracking technique. The examination of gaze and fixations pattern allowed us to outline some peculiarities of reading in the Italian language. The presentation reviews the stages of our research. We start how eye movements parameters vary as a function of the characteristics of the text, pass through the pattern of oculomotor development in learning to read, toward evidences of the “fragmented” eye movement pattern along the text in children with dyslexia and the treatment of their reading deficit. Furthermore, the measurement of the “eye-to-voice distance” in reading aloud tasks revealed a further facet of dyslexia. Finally, the use of eye tracking in the active control of the maintenance of fixation over specific targets has made it possible to reliably examine phenomena such as visual crowding, connected with reading and implicated in dyslexia.

## ASSOCIATION BETWEEN READING AND SPELLING PERFORMANCE IN DYSLEXIC CHILDREN: A SINGLE-ITEM APPROACH

*Paola Angelelli (Università del Salento)*

Children with dyslexia present a slow and stunted reading, with reading times directly proportional to the number of letters. In spelling, they have greater difficulty in writing words with potentially ambiguous spelling and a high prevalence of phonologically plausible errors, a pattern that is particularly clear at the end of primary school (Angelelli et al. 2004; Angelelli et al. 2010). Thus, in children with dyslexia there is a limited efficiency of lexical processing in both reading and spelling, although the expression of the deficit may vary according to age and schooling. The parallelism of reading and writing performance is examined in various studies with a single item approach, with the aim to understand the functional locus of dyslexic children lexical deficit and the extent and quality of their orthographic representations. The results confirmed a close parallelism between the orthographic lexical representations used for reading and spelling: Children were more impaired in judging items they consistently misspelt and more accurate in judging items they always spelt correctly. Overall, findings support the hypothesis that a single orthographic lexicon may be responsible for reading and spelling performance in dyslexic/dysgraphic children.

## ABILITY TO CONSOLIDATE INSTANCES AS A PROXY FOR THE ASSOCIATION AMONG READING, SPELLING, AND MATH DISORDERS

*Chiara Valeria Marinelli (Università degli Studi di Foggia)*

Skill learning (e.g., reading, spelling and math) as well as their corresponding deficits, tend to partially overlap (Zoccolotti et al., 2021). Associations among learning disorders is due to an acquisition factor, i.e., to the “ability to consolidate instances”, which is responsible for automatized behaviour (Marinelli et al., 2021). Some children have a low ability to consolidate instances (automatize) and this influence their performance in reading (by limiting their ability to form lexical entries) as well as in spelling (again, limiting lexical acquisition) and doing maths (dampening the ability to acquire arithmetic facts). Individual ability to consolidate instances with learning opportunities of a child correlates to his/her ability in tasks that call for the specific knowledge of individual items, such as spelling or making an orthographic decision on a word with ambiguous transcription or retrieving arithmetic facts. Then, a good learning ability, as assessed by better ability in consolidating instances, acts as a cross-domain predictor of performance that allows to explain the association between learning disorders.

# THE CAUSAL LINK BETWEEN READING AND ATTENTIONAL SKILLS: EVIDENCE FROM HUMAN STIMULATION, INTERVENTION STUDIES AND ANIMAL MODELS

*Proponente: Sara Bertoni (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Although the phonological theory identifies a phonological processing impairment as a core deficit of dyslexia (D), visuo-spatial attention has been reported to be a potential endophenotype for D. Since visuo-spatial attention is used to rapidly move the attention and to reduce the impact of irrelevant information, its impairment reduces the efficiency in filtering distractors, such as the letters that surround the target letter in a word. To better understand the etiopathological mechanisms underlying the development of D and the causal link between attentional skills and D, this symposium will analyse the following topics: 1) how animal models can be used as a valid and reliable tool to investigate the effects of candidate genes and environmental manipulations upon neurodevelopmental disorders; 2) how tDCS on temporo-parietal regions can affect reading skills by affecting motion perception and visuo-spatial working memory in children with D; and, 3) how attentional control can improve reading skills through the standard clinical exercises recreated with action video game characteristics, and how action video games could induce plasticity in different brain areas linked to reading skills.



## ANIMAL MODELS OF DEVELOPMENTAL DYSLEXIA

*Sara Mascheretti (Istituto Scientifico Eugenio Medea), Valentina Lampis (Istituto Scientifico Eugenio Medea), Rossella Ventura (IRCCS Fondazione Santa Lucia), Matteo Di Segni (IRCCS Fondazione Santa Lucia), Cecilia Marino (Center for Addiction and Mental Health), Francesca Romana D'amato (CNR Institute of Biochemistry and Cell Biology)*

Developmental dyslexia (DD) is a complex neurodevelopmental disorder and the most common learning disability among both school-aged children and across languages. Sensory and cognitive mechanisms have been recently reported to be potential endophenotypes (EPs) for DD, and nine DD-candidate genes have been identified. Animal models have been used to investigate the etiopathological pathways that underlie the development of complex traits as they evaluate the effects of genetic and/or environmental manipulations, and they have been linked to cutting-edge clinical research questions by capitalising on the use of EPs. During this talk, we will review previous studies of murine models investigating the effects of DD-candidate genes and we highlighted the use of animal models as an innovative way to unravel new insights behind the pathophysiology of reading (dis)ability and to assess cutting-edge preclinical models.

## READING CHANGES FOLLOWING TDCS IN CHILDREN AND ADOLESCENTS WITH DYSLEXIA: THE ROLE OF VISUO-SPATIAL ATTENTION AND MOTION PERCEPTION

*Giulia Lazzaro (Unità Operativa di Neuropsichiatria dell'Infanzia e dell'Adolescenza, Dipartimento di Neuroscienze, IRCCS Ospedale Bambino Gesù), Floriana Costanzo (Unità Operativa di Neuropsichiatria dell'Infanzia e dell'Adolescenza, Dipartimento di Neuroscienze, IRCCS Ospedale Bambino Gesù), Sandro Franceschini (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Cristiana Varuzza (Unità Operativa di Neuropsichiatria dell'Infanzia e dell'Adolescenza, Dipartimento di Neuroscienze, IRCCS Ospedale Bambino Gesù), Simone Gori (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Stefano Vicari (Dipartimento di Scienze della Vita e Sanità pubblica, Università cattolica del Sacro Cuore - IRCCS Ospedale Pediatrico Bambino Gesù di Roma, Unità Operativa di Neuropsichiatria dell'Infanzia e dell'Adolescenza, Dipartimento di Neuroscienze), Deny Menghini (Unità Operativa di Neuropsichiatria dell'Infanzia e dell'Adolescenza, Dipartimento di Neuroscienze, IRCCS Ospedale Bambino Gesù)*

Dyslexia (DD) is a brain-based disorder with an atypical activation of posterior left- hemisphere temporo-occipital and temporo-parietal regions and multiple neuropsychological deficits. Transcranial direct current stimulation (tDCS) is a mean for manipulating neural activity and, in turn, neurocognitive processes. While studies demonstrated effects of tDCS on reading, neurocognitive changes were poorly investigated. The proof-of-concept study examined whether tDCS on temporo-parietal regions affected reading as well as phonological skills, visuo-spatial working memory (WM), visuo-spatial attention, and motion perception in a polarity-dependent way. Ten youths with DD performed reading and neuropsychological tasks after 20 min of exposure to Left Anodal/Right Cathodal (LA/RC) and Right Anodal/Left Cathodal (RA/LC) tDCS. LA/RC tDCS compared to RA/LC tDCS improved reading, motion perception, and modified attentional focusing. Changes in reading—after LA/RC tDCS compared to RA/LC—were related to changes in motion perception and in visuo-spatial WM, respectively. Our findings demonstrated that reading and domain-general neurocognitive functions in a group of youths with DD change following tDCS and that they are polarity-dependent

## VIDEO GAME-BASED INTERVENTIONS TO IMPROVE READING SKILLS THAT INCORPORATE EFS AND ACTION-BASED MECHANICS

*Angela Pasqualotto (University of Geneva, Switzerland)*

The process of learning to read is multifaceted and complex, as it depends not only on language abilities but also upon several executive functions (EFs). In cases of developmental dyslexia (DD), the complexity of reading is especially clear. A growing body of evidence suggests that there are EFs deficits in DD, but few studies have examined whether training in EFs can facilitate reading development in both typically reading children and children with DD. We therefore devised a video game intervention (Skies of Manawak; SOM) aimed at improving attentional control and several aspects of EFs associated with fluency in reading. The game is designed as a video game characterized by a unified story arc and adaptive activities linked by action-based mechanics. The effectiveness of SOM has already been tested on typically reading (Study 1) and dyslexic (Study 2) Italian children.

## THE SHORT-TERM EFFECT OF ACTION VIDEO-GAME IN MAGNOCELLULAR-DORSAL STREAM AND ATTENTIONAL CONTROL

*Sara Bertoni (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Sandro Franceschini (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

The long-lasting effects of action video-games (AVG) training seem to enhance visual attentional skills probably improving the magnocellular-dorsal (MD) stream functioning. To investigate how AVG could induce plasticity in different brain areas linked to reading skills, the transient effects induced by a single session of AVG or non-AVG on different neurocognitive skills, will be shown. The first study demonstrates the short-term effects of AVG, on reading improvement and the enlargement of focus of attention, in children who are learning to read. In the second crossover randomized controlled trial, the AVG reduces sensorimotor and reading deficits, enhancing the global perception, in children with developmental coordination disorder and dyslexia. Despite adult brain has a reduced plasticity, the third study shows that a single session of AVG could temporally impair the sensitivity of the parvocellular-ventral stream in healthy adults. The results of these three studies suggest the role of MD stream and the attentional control also in the short-term plasticity induced by AVG.

# ANTICIPATORY MECHANISMS FOR ADAPTING BEHAVIOR: A MULTI-DOMAIN PERSPECTIVE

*Proponente: Giovanni Mento (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

A key to understand how our cognitive system succeeds to adapt behavior is its intrinsic ability to use environmental information to anticipate relevant upcoming events. Anticipation can arise from either explicit or implicit predictive knowledge and bias the processing of different stimulus features, prioritizing spatial, temporal or more complex dimensions. The symposium offers a multi-domain perspective on the topic, through four experimental contributions targeting different anticipatory mechanisms and methodologies. Specifically, study 1 will show that even young children use implicit environmental regularities to dynamically control impulsivity. Study 2 will propose a series of behavioral experiments shedding light on how spatial and temporal expectations interact to orient visual attention before target occurrence in young adults. Finally, the last two studies will unravel the neural anticipatory mechanisms of action control in task requiring inhibition (study 3) and intention recognition during action observation (study 4) by means of brain recording and stimulation techniques. The discussion will pull together all the experimental findings in the attempt to critically reason on a common theoretical framework that describes how anticipatory cognition shapes behavior.

## TO RISK IT OR NOT: HOW THE GLOBAL PREDICTIVE CONTEXT SHAPES CHILDREN'S ANTICIPATION OF RISKINESS IN A DECISION-MAKING TASK

*Lisa Toffoli (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Fiorella Del Popolo Cristaldi (Dipartimento di Psicologia Generale, Università degli Studi di Padova - IRCCS 'E. Medea' La Nostra Famiglia), Gian Marco Duma (Institut de Neurosciences des Systèmes, Aix-Marseille Université, France), Giovanni Mento (Dipartimento di Psicologia Generale, Università degli Studi di Padova - Padua Neuroscience Center, Università degli Studi di Padova)*

Adaptive Cognitive Control (ACC) is the ability to implicitly exploit statistical regularities in the environment to anticipate optimal allocation of cognitive resources in relation to internal and external demands. In this study, we investigated ACC in children aged 4 to 7 years (N=181). We used a modified version of the Balloon Analogue Risk Task (BART), which requires children to inflate virtual balloons, earning candies at each pump. Colour of balloons was predictive of balloons' probability of exploding (high or low) after a certain number of pumps. The task comprised two blocks with inversed association between colour-explosion probability. Blocks' order was fixed between participants, who were not informed about the changing predictive value of balloon's colour. We found that all children were able to both generate and update prediction based on implicit colour-risk association, showing a higher number of pumps to the balloons whose colour was recently associated to the lowest probability of exploding. Hence, the predictive context shaped children's ability to anticipate risky behaviour. Our results suggest that young children are able to flexibly adapt and optimize their decision-making behaviour on the basis of implicit contextual predictive rules.

## SPATIAL AND TEMPORAL EXPECTATIONS: INDEPENDENT OR INTERACTIVE PROCESSES?

*Mariagrazia Capizzi (Department of Experimental Psychology, University of Granada, Spain), Ana B. Chica (Mind, Brain and Behavior Research Center, University of Granada, Spain - Department of Experimental Psychology, University of Granada, Spain), Pom Charras (Univ Paul Valéry Montpellier 3, France)*

Being able to anticipate where and when a relevant event will occur is fundamental for survival. Previous studies have mostly investigated spatial and temporal expectations separately, with relatively less research on the question of whether the two expectation types operate independently or interactively to optimize behavior. Moreover, the majority of studies combining spatial and temporal expectations used endogenous cues to indicate the spatial location and/or the moment of target occurrence. Yet, spatial and temporal expectations may be also established through exogenous cues. Across a series of behavioral experiments, we modified the Posner's spatial orienting task in order to manipulate endogenous and/or exogenous spatial and temporal expectations in a single session. Our findings provide evidence that spatial and temporal expectations mostly operate independently when at least one of the two expectations is endogenously deployed, whereas interactive effects may arise under specific exogenous manipulations.

## DIFFERENT PROACTIVE AND REACTIVE COGNITIVE CONTROL IN CHOICE-RESPONSE AND GO/NO-GO TASKS

*Marika Berchicci (Università degli Studi G. d'Annunzio di Chieti-Pescara), Valentina Bianco (Università degli Studi di Udine), Francesco Di Russo (Università degli Studi di Roma Foro Italico)*

Choice-discrimination tasks are usually employed to investigate cognitive and motor processing underpinning goal-directed actions, wherein both the cognitive-motor preparation and the perceptual processing are critical. Twenty young volunteers (22.7 [3.1] years; 6 F) performed three tasks: the choice response task (CRT), the Go/No-go and the simple response task (SRT). Using ERPs, both proactive and reactive (before and after stimulus presentation) task processing phases were examined. Three pre-stimulus ERP components were considered: the prefrontal Negativity (pN) likely reflecting proactive cognitive control, the Bereitschaftspotential (BP) reflecting motor preparation, and the visual Negativity (vN) reflecting visual readiness. Four post-stimulus components were analyzed: the typical N1 and P3, and the prefrontal N1 and P1 (pN1 and pP1) likely reflecting sensory-motor integration and awareness, respectively. Results showed enhanced i) proactive cognitive control, motor readiness and perceptual processing in discriminative tasks, and ii) visual readiness in the simple task. The Go/No-go task elicited the largest amplitudes, probably because of the multiplicative interaction between several sources of temporal, target and stimulus-response uncertainty in this task.



## EXPLORING THE EFFECTS OF CEREBELLAR TRANSCRANIAL DIRECT CURRENT STIMULATION ON THE PREDICTION OF SOCIAL AND PHYSICAL EVENTS

*Alessandra Finisguerra (Scientific Institute, IRCCS E. Medea, Pesian di Prato, Udine)*

The context in which actions occurred supports the prediction of others' action. Patients with cerebellum alteration weakly rely on context when predicting others' action. We tested the cerebellar involvement in using contextual prior to interpret ambiguous information for social and for physical events. We used anodic, cathodic and sham cerebellar transcranial Direct Current Stimulation (ctDCS) to modulate the performance of healthy adults in tasks requiring the prediction of social actions or moving shapes. In an earlier implicit-learning phase, we manipulated the probability of co-occurrence between specific action/shape and contextual cues, which could provide strongly or moderately informative expectations. The use of expectations was then tested when participants had to predict the unfolding of temporally occluded videos, under perceptual uncertainty (testing). During testing, but not during learning, cathodic vs. anodic and sham ctDCS hindered participants' ability in predicting actions embedded in strongly informative contexts while anodic vs. sham ctDCS boosted the prediction of actions embedded in moderately informative contexts. No ctDCS effects for the shape task were found, suggesting a specific involvement of the cerebellum in forming social expectations.

# MOVE THE DISTANCE CLOSER: REINVENTING COGNITIVE ASSESSMENT THROUGH TELENEUROPSYCHOLOGY

*Proponente: Mario Bonato (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

In this symposium we will address the limits and the advantages of teleneuropsychology by describing four recent experiences in this emerging domain. The first contribution (Mondini) will present two cognitive screening tests, administered from remote, tele-GEMS (telephone) and auto-GEMS (web-based graphical interface). The second contribution (Bonato) will exploit the better sensitivity and ecological validity of using computer-based multitasking for the assessment of subtle cognitive deficits. The third contributor (Guariglia) will mostly focus on a tablet-based tool for the very early detection of cognitive decline and emphasize the advantages of self-administered tools. The last contributor (Bottini) will present a web-based platform for neuropsychological evaluation through lifespan. She will describe specific experiences and application fields. Altogether, the experience from these four different labs will provide a state-of-the-art academic overview about teleneuropsychology in Italy.

## COGNITIVE SCREENINGS IN REMOTE SETTINGS: TELE-GEMS AND AUTO-GEMS

*Sara Mondini (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Giorgio Arcara (IRCCS Ospedale San Camillo), (), (), Alessia Carraro (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Giorgia Durante (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Sonia Montemurro (IRCCS Ospedale San Camillo), Veronica Pucci (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova)*

A recent change in neuropsychological practice for assessment purposes consists of interacting with examinees online either with video or phone calls (i.e., teleneuropsychology). This may also extend to discussing the performance of computer-based tasks that examinees have been instructed to perform independently. In this context from a new cognitive screening, the Global Examination of Mental State (i.e., GEMS) we propose two new remote screenings: 1) Tele-GEMS, administrable via telephone or video call and 2) Auto-GEMS web-based, self-administered version. Tele-GEMS and Auto-GEMS are validated on 600 participants each (healthy adults). Both versions have 10 tasks tapping into Orientation, Memory, Spatial Representation, Language and Pragmatic abilities. Both tools show good internal consistency, test-retest reliability, and a very good correlation between two parallel forms. Clinical cut-offs of Tele-GEMS and Auto-GEMS consider age, sex, education and cognitive reserve. All materials will be freely accessible online under a Creative Common License and due to their solid psychometric properties, they are innovative tools to assess or monitor cognition remotely, suitable to integrate a more comprehensive in-person evaluation.

## MULTITASKING ACROSS LIFESPAN. FROM THE LAB TO CLINICAL APPLICATIONS

*Mario Bonato (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

Multitasking is a ubiquitous necessity, which is becoming fundamental in our daily routines yet it also can be a useful tool for detecting subtle cognitive impairment. I will present an online study (n=300, age 50-89) investigating the impact of a secondary auditory sustained attention task upon the encoding of a set of images. Results showed a linear, age-related, decrease in performance. After controlling for floor/ceiling effects, dual-task interference was stable across different ages. Participants with a high global dual-task interference scored lower than peers on cognitive tests. In the second part of the talk I will present new evidence suggesting how a computer-based multitasking approach, now available online, is an ideal approach for exacerbating visuospatial asymmetries (neglect and extinction) in stroke patients and can be easily administered in also in acute patients. While maintaining the rigour of the lab, cognitive-cognitive dual-task paradigms provide a sensitive measure of performance under cognitive load. They mimic everyday situations demands and might lead to new clinical applications allowing to exacerbate subclinical deficits. The online format allow these tasks to be freely available to the clinical and scientific communities.

## DRAWING THE SLOPES OF AGING: TOWARDS AN EARLY, PRE-CLINICAL DIAGNOSIS OF NEUROCOGNITIVE DISORDERS

*Cecilia Guariglia (Dipartimento di Psicologia, Sapienza Università di Roma), Maddalena Boccia (Dipartimento di Psicologia, Sapienza Università di Roma), Fabrizia D'antonio (Dipartimento di Neuroscienze Umane, Sapienza Università di Roma), Carlo De Lena (IRCCS San Raffaele Roma), Antonella Di Vita (Dipartimento di Neuroscienze Umane, Sapienza Università di Roma), Pierandrea Mirino (Dipartimento di Psicologia, Sapienza Università di Roma), Laura Piccardi (Dipartimento di Psicologia, Sapienza Università di Roma), Alice Teghil (Dipartimento di Psicologia, Sapienza Università di Roma - IRCC, Fondazione Santa Lucia, Roma)*

The need to anticipate the identification of elder individuals who will develop a neurocognitive disorder (ND) suggests developing novel instruments able to detect the very early, pre-clinical signs of cognitive decay. We developed DiaNe, a screening battery tapping some of the cognitive functions that are affected since the early stages of the main types of ND (i.e. Alzheimer and FTD). DiaNe has been designed to monitor cognitive aging in individuals by comparing the results of consecutive administrations on the same individual with the expected ones: performance significantly worse than expected will signal the ongoing onset of ND when individual performance are still within normal range. DiaNe may be self-administered; after the administration, data will be transferred on a central database, accessed by a neuropsychologist who analyzes results; data will also be processed by a machine learning system that will provides updating of standardization. Preliminary results of a longitudinal study aimed to draw slopes of cognitive aging in healthy elders (50-70 years old) tested 5 times in 4 years will be presented.

## INTRODUCING VANIT: A BATTERY OF TESTS DESIGNED FOR A VIDEOCONFERENCE-BASED TELE-NEUROPSYCHOLOGICAL ASSESSMENT

*Gabriella Bottini (Università di Pavia), Damiano Crivelli (Università di Pavia), Valeria Peviani (Department of Neuroscience, Max Planck Institute for Empirical Aesthetics, Germany), Edoardo Nicolò Aiello (Università degli Studi di Milano-Bicocca), Gerardo Salvato (Università di Pavia), Pina Scarpa (ASST Grande Ospedale Metropolitano Niguarda Milano), Paola Perini (Istituto di Riabilitazione Madre della Divina Provvidenza Agazzi), Fabrizio Pasotti (Dipartimento di Riabilitazione, Ospedale Civile di Voghera, Azienda Socio-Sanitaria Territoriale di Pavia), Stefania Basilico (ASST Grande Ospedale Metropolitano Niguarda Milano)*

Tele-neuropsychology (TeleNP) allows patients to overcome difficulties in accessing in-person evaluations. Instruments for TeleNP allowing a comprehensive cognitive evaluation are still lacking. I will describe the creation and implementation of a video conference based TeleNP battery, VaNIT and introduce its usability and feasibility in healthy individuals. VaNIT includes 15 verbal (cognitive efficiency, productive language, executive functions, verbal short- and long-term memory) and 14 visuo-spatial (receptive language, executive functions, visual short- and long-term memory, visuo-spatial abilities) tests. Forty healthy subjects underwent the pilot study. Age and education affected most measures. No relevant sex differences were detected. Ceiling effects and inter-individual variability were frequent findings. Novel tasks proved to converge to well-known measures at the within-domain level. VaNIT has a modular and interactive nature, with a more adaptive patients evaluation. A single platform allowing the administration of verbal and visuo-spatial tests provides comprehensive and fine-grained outcomes. We aim to standardize the battery and assess its clinical usability.

## MUSIC AND MEMORY: FROM SENSORIMOTOR ACTIVATIONS TO SOCIAL INTERACTION

*Proponente: Laura Ferreri (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia - Université Lumière Lyon 2, France)*

Music is a complex stimulus able to activate the whole brain through a diverse set of perceptive and cognitive operations. As humans, we show a remarkable capacity to learn and memorize musical structures through both simple exposure (i.e., listening to music) and active practice (i.e., playing an instrument). But which are the mechanisms supporting music memory processes? Based on behavioral, psychophysiological, neurostimulation, and neuroimaging-hyperscanning studies, this symposium aims at discussing recently-identified neural and cognitive mechanisms behind the ability to memorize and reproduce music. Data from both individual and social-interactive tasks will be presented by young researchers from different research centers. Animated by an expert in the field, Prof. Elvira Brattico, the symposium will propose challenging perspectives on music and memory, and discuss their possible implications in both pedagogical and clinical settings.

## THE ROLE OF PREMOTOR CORTEX IN MUSIC PERCEPTION AND PERFORMANCE

*Carlotta Lega (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

Music perception and performance are a natural human activity. Nevertheless, both require the implementation of complex sensorimotor mechanisms. At the neural level, this is accomplished by the dorsal perception for action stream, that links auditory information and motor plans. However, how motor planning regions in the human brain actively contribute to musical learning and perception is still an open question. In a first experiment, by means of Transcranial Magnetic Stimulation (TMS) we provide causal evidence for the role of premotor cortex (PMC) in linking auditory information to motor responses to guide musical motor learning. In particular, we showed that the dorsal PMC is a key structure in the learning of novel auditory-motor associations. In a second experiment, event-related TMS was applied to single locations of a dense grid of six points on the participants' right hemiscalp, covering the dorso-medial part of the PMC, while participants performed a rhythm perception task. Results indicated the causal involvement of different portion of the PMC in auditory rhythm perception, when no overt movement is required. Together, the two experiments provide causal evidence demonstrating the role of PMC in supporting auditory-motor processing in music perception and production.



## ON THE NEURAL AND COMPUTATIONAL UNDERPINNINGS OF MEMORY OF STRUCTURES IN TONE SEQUENCES

*Roberta Bianco (University College London, UK - Istituto Italiano di Tecnologia)*

Music engagement rests on the implicit ability of the brain to learn statistical patterns in the music. How are such patterns learned in the first place, and, how do they stick into long-term memory? In a first pupillometry study, we found greater pupil dilation to pitch violations embedded in structured than unstructured music, providing an autonomic readout of human sensitivity to stimuli statistics. A second MEG study used tone sequences much more rapid than music to tap into automatic sequence processing free of participants awareness or music cultural biases. The brain responses closely tracked pattern changes in the sequences, indicating high-fidelity short-term memory of the just past stimuli. In a final series of behavioural studies, we showed that listeners retained implicit long-term memory of arbitrary tone patterns that reoccurred sparsely and only a few times. This memory generalised to transposed patterns, and lasted for months. A computational learning model reproduced the participants' performance by integrating parameters associated with sensory buffer, short- and long-term memory decay. This work offers new avenues to understand how failure of mnemonic operations may hamper humans' ability to capture fine structures within temporally evolving sounds.

## SHARING MUSIC LISTENING TO ENHANCE PLEASURE AND MEMORY

*Laura Ferreri (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia -  
Università Lumière Lyon 2, France)*

Through dopaminergic transmission in the reward system, musical pleasure can drive benefits on memory. The social sharing of an event increases its perceived emotional intensity activating the reward system. In line with this evidence, we showed in a first online study that participants reported to feel more musical pleasure when listening to music concomitantly with other people. Therefore, in second study, we explored the hypothesis that sharing music listening would enhance both musical pleasure and memory. Participants encoded unfamiliar classical music excerpts under two conditions: listening to music alone (Non Social), or with a group of people (Social). We measured musical pleasure through subjective ratings of pleasure and musical hedonia scores (BMRQ questionnaire). After an interference task, musical memory was tested through a recognition-recollection paradigm. In line with our hypothesis and previous findings, results revealed that the (illusory) social sharing increased both the reported pleasure and memory performance, especially for subjects with higher musical hedonia scores. Taken together, these findings confirm that music reward lies at the core of music-related memory benefits, and open perspectives for its enhancement via non-invasive, ecological fashion.

## ON THE ROLE OF INTER-BRAIN SYNCHRONIZATION IN SOCIAL INTERACTIVE LEARNING OF MUSIC

*Giacomo Novembre (Italian Institute of Technology)*

Much of music learning emerges as a result of interaction with others. What neurophysiological processes support efficient information transfer from a music teacher to a student? In a first fNIRS experiment, we show that brain activity recorded from the inferior frontal cortex (IFC) synchronizes across teachers and students engaged in a social interactive song-learning task. Furthermore, inter-brain synchronization predicted learning performance. In a second experiment, we exogenously stimulated IFC using transcranial alternating currents (tACS). Delivering 6 Hz currents, being in-phase between the teacher and the student, led to enhanced learning performance in the student. These effects were both phase- and frequency-specific: 6 Hz anti-phase stimulation, or 10 Hz in-phase stimulation, did not yield comparable results. Together, the two experiments provide correlational and causal evidence demonstrating that inter-brain synchronization of IFC supports social learning of music. Besides providing a neurophysiological characterization of social interactive learning, these results also hold relevance for widespread clinical and pedagogical practices.

# NEW FRONTIERS OF PSYCHOLOGICAL ASSESSMENT

*Proponente: Monica Mazza (Università degli Studi dell'Aquila)*

Psychometrics plays a key role in psychological assessment. In particular, clinical psychometrics is the aspect of the discipline that deals with the definition and measurement of clinical constructs and includes, among its interests, dimensions such as: knowledge, ability, personality, quality of life. Clinical psychometrics is an indispensable tool for multiple fields of psychological research and intervention, ranging from diagnostic assessment, to monitoring typical and atypical developmental processes, to creating interventions aimed at improving individuals' quality of life. In recent years, psychometrics is making an important contribution to the development of new assessment tools and new methodologies such as using gamified tasks, development of a Computerized Adaptive assessment or introduction of new diagnostic tests.

## A RASH RATING SCALE MODEL TO ASSESS COGNITIVE UNBALANCED ETHNIC PREJUDICE

*Stefano Boca (Dipartimento di Scienze Psicologiche, Pedagogiche, dell'Esercizio Fisico e della Formazione, Università degli Studi di Palermo), Eraldo Francesco Noicotra (Università di Cagliari)*

According to the theory of embodied cognition many features of cognition, whether human or otherwise, are shaped by aspects of an organism's entire body. Feeling and thinking should hence be detectable (and measurable) in the reaction of our true body to situational stimuli. More specifically, embodied cognition predicts that facing an individual belonging to a different ethnic group influence not only the way we think but also the way we move. In this study participants were asked to stand on a baropodometric balance while been exposed to faces of white or black people. The study was presented as an investigation of postural movement during a memory task, participants were instructed to pay attention to the faces since a small number of questions about what they have seen would be later posed. At the end, participants completed an IAT task and filled in the subtle and blatant prejudice scale. To assess participants' subtle and blatant prejudice variables were submitted to a Rash rating scale model. The IAT cognitive scores were expected to frame the responses to the subtle and blatant prejudice scale: only respondents with midrange implicit prejudice would show high subtle and low blatant prejudice. The same should be observed for the baropodometric data.

## USING GAMIFIED TASKS IN PSYCHOLOGICAL ASSESSMENT: AN ANALYSIS THROUGH NEURAL NETWORKS IN ADOLESCENT RISK TAKING

*Maria Anna Donati (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze), Andrea Frosini (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze), Azzurra Di Palma (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze), Caterina Primi (Dipartimento di Neuroscienze, Psicologia, Area del Farmaco e Salute del Bambino, Università degli Studi di Firenze)*

Gamification is a promising approach in assessment as game-based tools offer engaging experience for participants, short testing times, elicit low test-taking anxiety, are less prone to social desirability bias, and can be more predictive with respect to non-gamified measures. In this study, we compared the performance of a computerized task measuring risky decision making (Cups Task, Levin & Hart, 2003) - with respect to a gamified version of the same task - in predicting risk taking in the financial-gambling domain, measured with the DOSPERT scale (Barkley-Levenson et al., 2013). Both the tasks were composed by 54 trials, but the gamified task contained engaging audio and visual feedback and a character to drive. To analyze the two tasks, we used the Neural Networks (NNs), that can fit almost any nonlinear phenomenon and can identify patterns in subsets of the input variables. Participants were 195 adolescents (57% males, mean age = 17.13). Results showed that the gamified version of the task had a better performance in predicting financial-gambling risk-taking with respect to the original task. However, the percentage of cases correctly identified by the NN was relatively low even with the game. Indications for future research in psychological assessment are discussed.

## DEVELOPMENT OF A MULTIDIMENSIONAL COMPUTERIZED ADAPTIVE SHORT FORM OF THE MULTIPLE SCLEROSIS QUALITY OF LIFE-54 (MSQOL-54-MCAT)

*Andrea Giordano (Università degli Studi di Torino - Fondazione I.R.C.C.S. Istituto Neurologico Carlo Besta), Silvia Testa (Dipartimento di Scienze Umane e Sociali, Università della Valle d'Aosta), Marta Bassi (Department of Biomedical and Clinical Sciences L. Sacco, Università degli Studi di Milano Statale), Sabina Cilia (UOC Servizio di Psicologia ASP di Catania, Catania), Antonio Bertolotto (Neurology Unit & Regional Referral Multiple Sclerosis Centre, University Hospital San Luigi Gonzaga), Maria Esmeralda Quartuccio (Dipartimento di Neuroscienze, Ospedale San Camillo Forlanini), Erika Pietrolongo (Dipartimento di Neuroscienze, Imaging e Scienze Cliniche, Università degli Studi G. d'Annunzio di Chieti-Pescara), Alessandra Solari (Unità di Neuroepidemiologia, Fondazione IRCCS Istituto Neurologico Carlo Besta Milano), Rosalba Rosato (Dipartimento di Psicologia, Università degli Studi di Torino)*

Multiple sclerosis (MS) is the most common disabling neurological disease in young adults, and is characterized by variable disease course and clinical manifestations. Interest in Health-Related Quality of Life (HRQOL) of MS patients has been driven by a desire to broaden traditional outcome measures to include those not always evident on clinical examination, but nevertheless important to the patient. Existing tools are available in paper-pencil format and for most of them score calculation is burdensome, while score interpretation is not straightforward. The MSQOL-54 is one of the most used MS-specific HRQOL inventory. The availability of an adaptive version that immediately processes and scores items may improve instrument usability and validity. We aimed to evaluate whether a Multidimensional Computerized Adaptive Testing (MCAT) version of the MSQOL-54 (MSQOL-54-MCAT) is feasible, and could enhance HRQOL measurement. The project consisted of three actions: 1) To assess whether was possible to merge Italian and English language versions data, in order to obtain a unique big sample; 2) To apply the bifactor model to the MSQOL-54 items in order to verify whether a total HRQOL score can be calculated; 3) To develop the MSQOL-54-MCAT, and assess its performance.

## A FORMAL INTRODUCTION OF THE FRONTIERS AND THE NEIGHBORHOODS OF A CLINICAL OUTPUT IN COMPUTERIZED ADAPTIVE ASSESSMENT

*Umberto Granziol (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Andrea Brancaccio (Dipartimento di Filosofia, Sociologia, Pedagogia e Psicologia Applicata, Università degli Studi di Padova), Andrea Spoto (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

In the present contribution, we introduce a procedure to monitor the evolution of mental disorders, starting from the most likely symptoms observed from the first assessment. In particular, we propose and implement two sources of information that can be retrieved from an assessment instrument's output: The frontiers, defined as the collection of symptoms that should be investigated if a mental disorder worsens or improves. The neighborhoods, namely the collection of the proximal outputs that could be observed if some symptoms of the frontiers are removed or added from the frontiers. We applied the procedure to an adaptive version of a questionnaire used to assess depressive symptoms, on a sample of 383 individuals, including a subsample of patients. We observed that, in all the cases, the procedure led to accurately estimate both the frontiers and the neighborhoods of clinical outputs, adding information on both sets of symptoms and their likelihood. These results suggest that it is possible, since the first assessment, to collect those symptoms that should be either the focus of further assessment or the first target of a therapy. Finally, it is shown the adaptive nature of this procedure allows to save time in collecting the target symptoms.



## USING OF SOCIAL COGNITION BATTERY IN THE CLINICAL SERVICES FOR AUTISM

*Maria Chiara Pino (Dipartimento di Scienze Cliniche Applicate e Biotecnologiche, Università degli Studi dell'Aquila), Marco Valenti (Dipartimento di Scienze Cliniche Applicate e Biotecnologiche, Università degli Studi dell'Aquila), Monica Mazza (Dipartimento di Scienze Cliniche Applicate e Biotecnologiche, Università degli Studi dell'Aquila)*

A central element of the diagnostic process is the psychological assessment, however, tests are not always able to support the clinician in the decision making. In this study, we consider the diagnostic iter for autism diagnosis. Autism spectrum disorder (ASD) is a heterogeneous neurodevelopmental disorder, characterised by range of atypical social interactions, communication difficulties, repetitive and stereotyped behaviour and restricted interests (APA, 2013). Currently, the accepted gold standard for ASD diagnosis is the Autism Diagnostic Observation Schedule, 2nd Edition (ADOS-2). An important limit of the ADOS-2, like all tests based on observation, is that diagnostic characteristics seem to change among clinicians and the results for the same individual can be different if the evaluation is subsequently repeated. The ASD individuals show Social Cognition (SC) abilities impairment, but clinical services have largely ignored SC tests when supporting autism diagnoses. For this reason, the present project aims to validate a social cognition test protocol specific for children and adults to support the diagnosis of ASD. We suggest that the better the knowledge of SC functioning in individuals with ASD, the more effective the diagnostic iter.

## WAS THAT REAL? WALKING THE THIN LINE BETWEEN REAL AND FALSE MEMORIES

*Proponente: Luca Rinaldi (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia)*

What is memory? What is memory for? Although memory is still probably the most studied function in cognitive sciences, answering these fundamental questions remains a puzzling challenge. Memory can be defined as the ability to retrieve information, but this definition does not account either for the fact that this information is continuously changed or for the lack of a precise correspondence between what was originally encoded and what is later retrieved. In particular, what emerges from several decades of investigation on false memories is that these distortions can be induced in a large percentage of the population and that they have the potential to influence the future behavior of these individuals. The talks planned in this symposium will illustrate that both low-level and high-level processes contribute to the formation of false memories, with such distortions being pervasive for voluntary and involuntary memories. We will thus discuss how phenomena such as false memories are essential for understanding memory as a predictive system.

## MEMORY AS A PREDICTIVE SYSTEM

*Tomaso Vecchi (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia)*

Generally speaking, the study of memory concerns how remembering works. But do we really need to remember the past? In my talk I will explore a change in scientific perspective on memory, conceiving it as a system suited for predicting the future rather than for remembering the past. Indeed, the “errors” that human memory routinely makes are consistent with the idea of considering memory as a predictive system. In my talk, I will thus review neurophysiological as well as behavioral data that converge in identifying the cerebellum as the critical brain area underlying a predictive memory hypothesis, incorporating storage, updating, integrative and predictive functions in a network comprising motor, frontal and limbic structures. This well fits with an extensive model of memory in which the role of the cerebellum and of sensory cortical areas is mediated by activity in the limbic system, further explaining the effect of emotions in modulating different human memories.

## SEMANTIC COMPONENTS OF VERIDICAL AND FALSE MEMORY

*Daniele Gatti (Dipartimento di Scienze del Sistema Nervoso e del Comportamento, Università di Pavia)*

The exact semantic processes subserving the formation of false memories are still poorly understood. Here, we directly probed the semantic origins of false memories in a typical Deese–Roediger–McDermott (DRM) task, by predicting participants' performance through data-driven distributional semantic models, a usage-based modelling approach to meaning. Participants were required to study lists of words and then to perform a recognition task. Our findings indicate that memory performance follows a continuous semantic gradient, with higher false recognitions occurring for higher semantic similarity, in turn indicating that semantic memory is differently involved in veridical and false memories. These effects were further investigated by taking advantage of a mouse-tracking paradigm, which showed that the participants' degree of indecision while rejecting false memories was greater for more semantically similar words. On these grounds, we outline an empirically-driven theoretical framework to account for the semantic processes supporting veridical and false memories formation in the DRM task.

## HOW OUR OWN AND OTHER PEOPLE'S ACTIONS CAN TRICK MEMORY PROCESSES

*Francesco Iani (Università degli Studi di Torino)*

The concept of “action simulation” plays a central role in the debate about so-called “Embodied Cognition” (EC). For example, when we observe the actions of other people, EC predicts that we internally simulate the observed action in order to anticipate future action states through an embodied mechanism consisting in the activation in the observer, without overt movements, of the same motor patterns that characterise the observed actions. Similarly, events stored in our memory can be considered as “mental simulations” consisting in the covert reactivation of sensory-motor patterns originally associated with the events at encoding. In other words, this embodied approach asserts that the body is the medium in which and through which the sensorimotor modalities actually simulate the observed or remembered events. Few studies, however, have examined the possible negative effects of such mechanisms on memory accuracy. Within the advanced theoretical framework, the activation of the sensorimotor patterns associated with the observed or remembered action is not necessarily a faithful reproduction of the original sensorimotor aspects. Therefore, this new perspective implies that low-level processes may also contribute to the reconstructive mechanisms involved in memory processes.

## DISTORTIONS IN AUTOBIOGRAPHICAL MEMORY: INVOLUNTARY MEMORIES AND THE DIRECT VS GENERATIVE RETRIEVAL DEBATE

*Giuliana Mazzoni (Sapienza Università di Roma), Gianmarco Convertino (Sapienza Università di Roma), Michela Marchetti (Sapienza Università di Roma)*

Retrieval in autobiographical memory is conceived as reconstructive, and substantial evidence has been reported in support of the idea that personal memories can be distorted by external interventions. More recently, a new type of memory has been studied, in which retrieval occurs spontaneously in response to a mainly external trigger, and without the intention to remember. These involuntary pop-up mental contents have been investigated using diaries which only in a limited way make it possible to assess accuracy. Here I present two studies with a new methodology allowing for the assessment of misinformation effects on involuntary memories. Participants were asked to perform a series of activities, which constituted the personal event to remember. Retrieval was both voluntary and involuntary. In both conditions, words were presented as retrieval cues. A misinformation procedure was used before the voluntary retrieval, and its effect was assessed on both voluntary and involuntary retrieval. Results showed that also involuntary autobiographical memories are subjected to the misinformation effect, even if to a lesser extent than voluntary memories. These results have important implications for theoretical models direct vs generative in autobiographical retrieval.

# EXPLORING THE EFFECTS OF MINDFULNESS ON SELF-AWARENESS AND SOCIALITY: FROM SELF TO OTHERS, AND BACK

*Proponente: Luca Simione (Istituto di Scienze e Tecnologie della Cognizione, CNR)*

Mindfulness refers to the individual ability to focus on internal experiences such as bodily sensations, thoughts, and emotions in an open and non-judgmental way, to cultivate equanimity and awareness. Plenty of studies in the last two decades have reported that mindfulness affects two important domains, i.e. low-level bodily processes, as linked to interoception and self-awareness, and high-level socio-cognitive processes, such as compassion, empathy, and morality. Interestingly, these low- and high-level processes have been recently linked, suggesting that they can interact with each other. Changes in self-awareness could trigger changes in the social domain, and, reciprocally, social contexts could affect the representations of the self and the space surrounding it. A refined understanding of the way in which mindfulness affects those constructs and how they interact could then inspire future research and mindfulness-based interventions. Therefore, we propose this symposium to present recent advances in this area of research from both an experimental and a theoretical point of view. We aim to propose an integrated view of the investigated mindfulness effects on self and social representations and to open further avenues of research.

## A UNIFIED MODEL TO UNDERSTAND THE EFFECTS OF MINDFULNESS ON COGNITIVE FLEXIBILITY, EMOTION REGULATION, SELF AND PSYCHOPATHOLOGY

*Antonino Raffone (Dipartimento di Psicologia, Sapienza Università di Roma)*

Several studies have shown the effects of mindfulness based meditation and interventions in terms of enhanced cognitive performances, such as those implicating attentional and executive functions, emotion regulation and self-referential processing. It thus appears important to develop a unified model to understand the mechanisms linked to such effects and their neural correlates. We thus propose a model of the effects of mindfulness on the three complementary and synergistic aspects of cognitive flexibility, emotional flexibility and self-referential flexibility. Such aspects are related to the interactions within and between core brain networks, i.e. the central executive network, the salience network, and the default mode network. They are further discussed as related to neurocognitive and neuroaffective findings, as well as to the triple network model of psychopathology, thus also addressing the implications of the model to understand the effects of mindfulness based interventions in psychopathology. Finally, the model enables an increased understanding of the relationships between mindfulness and autobiographical memory.



## MINDFULNESS MEDITATION IN DIFFERENT SOCIAL SETTINGS: THREE CASE STUDIES

*Nicola De Pisapia (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia)*

Recently, the psychological literature on contemplative practices has seen a very rapid growth, showing of these can be very effective in improving individual well-being, acting on metacognitive abilities and reducing psychophysiological activation. This presentation illustrates three original researches, which investigate the effects of contemplative protocols in three different social contexts. The first context is a high school, where the contemplative practices have been gradually introduced to both teachers and students, as well as their families. The goal was to investigate effects on stress management and relationship quality. A second study was carried out within an intensive business design course on methodologies for designing innovative products and services. The goal was to investigate the effects on the development of creative and innovative thinking. A third study was conducted in two prison settings. Sporadic studies are beginning to indicate the possibility of using meditative practices to help prisoners cope with situations of stress, anxiety and managing emotions, typical of the prison context. In this study, the goal was to investigate primarily anger management. The three social contexts are discussed and compared, emphasizing each one's limit and potential.

## DOES MINDFULNESS MEDITATION ENHANCE MORAL BEHAVIOR? EVIDENCE FROM AN EIGHT-WEEK MINDFULNESS MEDITATION TRAINING

*Giorgia Ponsi (Dipartimento di Psicologia, Sapienza Università di Roma - CLN2S@Sapienza, Istituto Italiano di Tecnologia - IRCCS Fondazione Santa Lucia), Susanna Feruglio (Dipartimento di Psicologia, Sapienza Università di Roma - Dipartimento di Lingue e Letterature, Comunicazione, Formazione e Società, Università degli Studi di Udine), Cristiano Crescentini (Dipartimento di Lingue e Letterature, Comunicazione, Formazione e Società, Università degli Studi di Udine), Maria Serena Panasiti (Dipartimento di Psicologia, Sapienza Università di Roma - IRCCS, Fondazione Santa Lucia, Roma)*

Recent meta-analyses suggest that mindfulness meditation (MM) may enhance prosocial behavior. Evidence about moral behavior is still scarce. We aim to explore the effects of an eight-week MM training on spontaneous moral decision-making during a card game in which participants face the temptation to deceive an opponent to gain a low vs. high payoff. We tested participants who underwent the MM training (experimental group, N=44) or were waiting to be enrolled (control group, N=25). We employed multilevel General Linear Mixed Models to perform statistical analyses, in which the deception was the dependent variable and condition (favorable, unfavorable), reward (low, high), group (experimental, control) and time (pre-training, post-training) were the predictors. We found a significant four-way interaction among condition, reward, group and time ( $\chi^2=8.53$ ,  $p=.003$ ). FDR-corrected post-hoc comparisons showed that the experimental group deceived significantly less in the post-training as compared with pre-training phase, for low ( $p=.014$ ) and especially high reward ( $p=.006$ ). The control group showed no significant change. The results suggest that MM might positively impact self-restraint in a sociomoral context, especially when the conflict between self-gain and other-harm is stronger.

## MINDFULNESS MEDITATION AND ATTACHMENT TO THE SELF: EVIDENCE FROM A POSTDICTIVE INTENTIONAL BINDING PARADIGM

*Salvatore Gaetano Chiarella (Sapienza Università di Roma), Luca Simione (CNR, Istituto di Scienze e Tecnologie della Cognizione)*

In accordance with Buddhist teachings, both behavioral and neuroscientific studies have reported that mindfulness meditation (MM) reduces high-level self-related processing. However, it is currently debated if MM also affects low-level self-representation such as the sense of agency (SoA), which has been proposed as a key mechanism of bodily or minimal self. We investigated how MM affects an implicit measure of the SoA known as intentional binding, using self vs other-associated stimuli, and comparing long-term meditators (N=32) with non-meditators (N=31). The study had two phases. First, in a perceptual matching task with self and other-related shape-label pairings, participants learned the shape-label associations. Subsequently, participants performed a postdictive intentional binding task with the same self- and other-associated stimuli displayed as target outcome of self-generated action. While meditators did show faster responses to self vs other shape-label processing like non-meditators, they did not show stronger binding for self- compared with other-associated outcome. The results indicate that while meditators preferentially process self-related stimuli, they are less attached to self-associated outcome. Implications for theories of self are discussed.

## HOW MINDFULNESS ALTERS THE PERIPERSONAL SPACE: A THEORETICAL PROPOSAL AND PRELIMINARY DATA

*Luca Simione (Istituto di Scienze e Tecnologie della Cognizione, CNR), Salvatore Gaetano Chiarella (Istituto di Scienze e Tecnologie della Cognizione), Antonino Raffone (Sapienza Università di Roma)*

Recent studies suggest that mindfulness meditation practices can modulate the experience of the self by impacting the sense of its boundaries. These boundaries are different from the physical edges of the body and concern the sense of being separated from the world, the sense of me versus not-me. Thus, self-boundaries go beyond the physical boundaries of the body and are flexible, as they depend upon sensory activities. Such boundaries can be identified in the peripersonal space, which is a multisensory representation of the space in which occurs interactions between the body and external objects. Crucially, the peripersonal space is not fixed, but is highly flexible and shaped by experiences, for example by using a tool or interacting with others. As mindfulness has also a credited effect on social skills and prosociality, here we propose a theoretical framework in which the effect of mindfulness on peripersonal space as a social space, i.e., an interface between the self and others, could lead to new insights about the role of mindfulness in shaping the self and sociality. We also show preliminary data on the relationship between mindfulness and peripersonal space collected in meditators and non-meditators.

# INNOVATIVE AND TRANSVERSAL APPROACHES TO UNDERSTANDING AFFECTIVE PROCESSES

*Proponente: Antonio Maffei (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova - Padova Neuroscience Center, Università degli Studi di Padova)*

Affective processes, such as emotions, moods, feelings, are a core element of psychological and behavioral dynamics. We are now witnessing a growing recognition of how incorporating affective processes in models of behavior is critical to achieve explanatory and predictive power. Yet, our ability to understand them is surprisingly limited. We believe that this understanding has been limited mainly by three factors. The first is the theoretical marginalization that emotions have faced in the context of the cognitive (neuro)sciences until the last two decades. The second are the methodological hurdles that affective scientists have to overcome. The third is that affective processes in the wild are complex, multifaceted and influenced by the context in which they unfold. Designing experiments sensitive enough to capture this complexity requires a fundamental shift in the way affective processes are usually conceived. The goal of this symposium will be to create a space for discussing these themes and to present the results of empirical studies, each employing a novel approach that contributes to moving the field a little step closer to solving the puzzle of emotions.

## ARE WE REALLY STUDYING EMOTIONS?

*Fiorella Del Popolo Cristaldi (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

In emotion research, the manipulation of participants' affective state is essential to achieve robustness and collect generalizable evidence. To be effective, emotion induction should be strong and ecologically valid. Despite this basic requirement, the majority of published research relied on weak and rather artificial induction procedures. Amongst the most common, passive exposure to affective stimuli (e.g., pictures/sounds) or emotional imagery (in which participants recall a past emotional experience). However, thanks to recent technological advances, it is now possible to access more innovative methodologies to study emotions. Dynamic affective stimuli (e.g., movie clips) are increasingly used, and greater attention to the context in which affective stimuli are presented is placed. Moreover, new approaches, such as the Ecological Momentary Assessment, allow to collect subjective and physiological measures as emotions occur in everyday life, simply by using participants' smartphones. Last, affective social interactions and shared emotions, often investigated from a physiological synchrony framework, are currently hot topics. Considering pros and cons of existing approaches, future research is encouraged to carefully (re)consider ecological validity in the study of emotions.

## “DEAR, YOU MAKE ME FEEL SAFE...OR NOT?!” A SOCIAL PSYCHOPHYSIOLOGICAL PERSPECTIVE ON THE STRESS BUFFERING HYPOTHESIS

*Antonio Maffei (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova - Padova Neuroscience Center, Università degli Studi di Padova), Elisabetta Patron (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Paola Sessa (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova - Padova Neuroscience Center, Università degli Studi di Padova)*

Research from social and health psychology and psychophysiology highlighted the benefit of social interactions on psycho-physical health. Unfortunately, due to the recent COVID-19 pandemic we are realizing how much is still to be learnt on the complex interactions between environment, individual differences and physiological reactions to stress, in order to identify the most vulnerable individuals. Previous investigations, using a standardized laboratory stressor, investigated cardiac vagal tone, a hallmark of autonomic flexibility linked with emotion regulation. Results showed that when facing a stressor together with a close other, like the partner, vagal tone is higher compared to facing a stressor alone. However several issues are still open. An under investigated aspect is how individual trait-like characteristics moderate the relationship between social presence and psychophysiological reactivity under stress. In an ongoing project we are seeking a better characterization of this effect, focusing on the role of attachment patterns. The main hypothesis is that individuals with insecure attachments will fail to benefit from the stress buffering effect of the partner's presence. On the other hand, its protective effect will be amplified in individuals with secure attachment.

## EXPLORING THE ASSOCIATION BETWEEN MOVIE GENRES AND REAL-TIME REPORTS OF THE AFFECTIVE EXPERIENCE

*Erika Sampaolo (Social and Affective Neuroscience Group, IMT School for Advanced Studies Lucca), Giada Lettieri (Social and Affective Neuroscience Group, IMT School for Advanced Studies Lucca - Crossmodal Perception and Plasticity Laboratory, Institute of Psychology, University of Louvain, Belgium), Giacomo Handjaras (Social and Affective Neuroscience Group, IMT School for Advanced Studies Lucca), Chiara Fabbro (Università di Pisa), Luca Cecchetti (Social and Affective Neuroscience Group, IMT School for Advanced Studies Lucca)*

Movies are ecological stimuli eliciting multifaceted emotional experiences. Thus, summarizing their affective features with a single term may be misleading. Here, we evaluate how much genres explain real-time affective reports during movie watching. A total of 105 participants (52F;  $26.11 \pm 3.47$  yrs) watched 50 full-length movies (18 genres) and continuously rated their emotions using 20 categories (e.g., joy, contempt). We estimated the average occurrence of the 20 emotions in each film and measured the cosine similarity between them. Also, we computed films' similarity on a movie-by-genre matrix. Kendall's  $\tau$  assessed the correlation between the two matrices. Movie similarity based on affect significantly correlates with genre ( $\tau = .33$ ,  $p < .001$ ). Graph analysis reveals 7 clusters of movies based on affect and 9 on genre, with only 26% of movie pairings belonging to the same cluster across graphs. Findings show that emotions elicited by movies relate to genres. Yet, genres alone do not capture emotional nuances in time-varying reports of experience, as testified by the weak/moderate correlation. Contextual information is crucial in eliciting complex states and should not be disregarded by emotion research. Lastly, affective reports could be used to refine movie recommendation systems.



## EMOTION UNDERSTANDING THROUGH FACE AND BODY IN BENIGN ROLANDIC EPILEPSY

*Michelle Giraud (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

The ability to recognize emotions is key to social cognition and depends on complex mechanisms involving frontal and temporal areas, which support healthy social and emotional information processing. Children with Benign Rolandic Epilepsy typically show widespread cortical thinning, associated with impairment in recognizing discrete emotions, which in turn could be associated with their altered social behaviour. These studies have only made use of faces to convey emotions, but recent neuroimaging and cognitive research suggest that the body plays a crucial role in expressing emotional information, especially, that congruent face-body emotional expression can facilitate emotion recognition. In this study, we investigated whether children with BRE show a benefit in emotion recognition when the latter is conveyed by faces and bodies together. To this aim, we presented children with faces and bodies alone, as well as whole-body images, measuring accuracy and RT. Preliminary results reveal that BRE children have a selective impairment in recognizing negative emotions conveyed by faces, but perform similarly to control children when the emotion is conveyed by whole-body stimuli, thus suggesting that emotional impairment in BRE could be potentially ameliorated using whole-body emotions.

## MEMORY, LANGUAGE AND MULTISENSORIALITY

*Proponenti: Silvia Serino (Università Cattolica del Sacro Cuore), Claudia Repetto (Università Cattolica del Sacro Cuore)*

The aim of this Symposium is to present theoretical reflections and experimental evidence describing the interplay between the cognitive processes and bodily states, in the framework of the Embodied Cognition. This perspective, in fact, proposes a highly integrated vision of mind and body in which mental operations, such as the understanding of a word or its memorization, are closely connected and dependent on our body. The idea of a close connection between cognitive processes and the body system implies that the perceptual system and the motor system actively participate in mental processes such as the construction of concepts, memorization, and the use of language. Accordingly, the Symposium will include five contributions focusing on the role of sensorimotor simulation in memory and language, the impact of bodily cues on the organization of the memory trace, and the multifaceted dimensions (perceptual, motor, social, linguistic) characterizing the semantics of the word.

## ACTION AND OBJECT SEMANTICS: META-ANALYTICAL EVIDENCE AND INSIGHTS FOR FUTURE RESEARCH

*Claudia Gianelli (Dipartimento di Medicina clinica e sperimentale, Università degli Studi di Messina)*

It is well established that processing actions linguistically activates a complex neural network that substantially overlaps with the one that serves action execution in a process termed motor resonance. Studies using a wide range of methodologies have pointed to a multifaceted picture of how actions semantics is encoded at the neural level and contextually activated. Interestingly, it has been shown that similar processes are at play when nouns referring to (graspable) objects are considered. While previous research on motor resonance has, by definition, focused so far on the role of motor and premotor cortices, it has been suggested that other areas (e.g., sensory) might play a key role as well. In this talk, I will present and discuss recent meta-analytical evidence that both supports and challenges this approach when considering action and object semantics comparatively across modalities (linguistic, visual). Based on our results, I will discuss possible avenues for future research and methodological insights aimed at broadening and refining the investigation of action and object semantics.

## MULTIMODAL MEMORY: A NEW PERSPECTIVE FROM EMBODIED COGNITION

*Francesco Iani (Università degli Studi di Torino)*

By definition, the result of a memory process is a kind of mental representation, a feeling, or a reliving experience of something that is not actually taking place. At first glance, then, the memory system, unlike other classical cognitive functions such as visual perception, attention, or language processing, seems to require a kind of disembodiment from the actual situation in which the subject and her/his body are involved. Based on these assumptions, one could argue that memory processes, more than others, must somehow be abstract and disembodied. In this talk, I will instead argue how memory processes can be viewed, at least in part, as mental simulations consisting in the reactivation of sensory and motor patterns originally associated with events at encoding, rather than as amodal representations. In this view, memory processes are multimodal: the content of the memory trace is closely related to the sensorimotor experiences collected during encoding. I will present some empirical evidence of how simple body manipulations can directly influence memory processes. I will then argue that the nature of retrieval processes highlights the flexibility of cognitive functions and the resulting need to study cognition beyond the classical distinctions implicit in cognitive science.

## THE CONCEPT OF GENDER. MOVING BEYOND THE ABSTRACT- CONCRETE DICHOTOMY

*Claudia Mazzuca (Sapienza Università di Roma)*

The debate on what “gender” is remains unsettled. In keeping with the literature on conceptual representations, gender might be considered a social concept, hence possibly belonging to the broader class of abstract concepts. However, this classification risks concealing more embodied—perhaps more concrete—aspects underlying the representation of gender. Recent accounts of abstract concepts underlining their heterogeneity might help reconciling these two apparently counterposed perspectives. In fact, recent evidence showed that abstract concepts are grounded into multiple dimensions, like interoception, affection, and linguistic components, often overlapping with traditional concrete aspects (e.g., exteroceptive, sensorimotor aspects). I propose that gender can be considered an embodied social concept, as its representation encompasses both abstract, linguistic features and concrete, embodied, and perceptual aspects—thus further blurring the boundaries between abstract and concrete concepts. This is also in line with recent understandings of gender/sex, acknowledging the intertwinement between biological and cultural factors in the constitution of gendered identities.

## THE ITALIAN SENSORIMOTOR NORMS: PERCEPTION AND ACTION STRENGTH MEASURES FOR 959 WORDS

*Claudia Rodella (Università Cattolica del Sacro Cuore), Claudia Repetto (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Francesca Conca (Fondazione Mondino IRCCS, Università di Pavia), Gaia Santi (Cognitive Neuroscience Center, Scuola Universitaria Superiore Pavia), Eleonora Catricalà (Fondazione Mondino IRCCS, Università di Pavia - Cognitive Neuroscience Center, Scuola Universitaria Superiore Pavia)*

Neuroscience research has proved that semantic information is stored in the brain in distributed areas involved in the sensorimotor processing of the most relevant features of the concept. For this reason, the normative measures of linguistic materials should provide information not only about general features of the concepts, such as concreteness and imageability, but also about the extent to which each word embeds perceptual and action properties. The present study, based on the Lancaster Sensorimotor Norms, collected ratings from 398 volunteers, recruited via the online platform Prolific, who assessed 959 Italian nouns and verbs mostly taken from the Italian adaptation of the Affective Norms for English Words (ANEW). A pool of 145 verbs was added to the original set. The words were rated on 11 sensorimotor dimensions: 6 perceptual modalities (vision, audition, taste, smell, touch and interoception) and 5 effectors (hand-arm, foot-leg, torso, mouth, head). The new verbs were also rated on the ANEW dimensions. The results showed good reliability and consistence with previous studies. Relations between perceptual and motor dimensions are described and interpreted, along with relations between the sensorimotor dimensions and the affective ones.

## EMBODIED SPACES: INSIGHTS FROM EXPERIMENTAL STUDIES

*Silvia Serino (Università Cattolica del Sacro Cuore), Claudia Repetto (Università Cattolica del Sacro Cuore), Giuseppe Riva (Università Cattolica del Sacro Cuore)*

In the last decades, a growing body of evidence has suggested the role of sensorimotor information in successful spatial memory encoding and retrieval. Nonetheless, the role of body-related cues in the formation of spatial maps in humans is still under debate, for both theoretical and methodological reasons, and much research remains to be carried out. Adopting an embodied approach to cognition, the general objective of this contribution is to discuss recent experimental evidence in this field suggesting that spatial memory is embodied, meaning that it incorporates body-related information guiding spatial retrieval. Finally, we will present preliminary data from an experimental protocol that asked participants to learn the spatial locations of body-related stimuli (i.e., hands) within a virtual environment. Importantly, the hands could either match the posture of the participants' own hand (first-person perspective) or the posture of another person (third-person perspective).

## NEW PERSPECTIVES AND METHODS IN PSYCHOMETRICS

*Proponenti: Pasquale Anselmi (Università degli Studi di Padova), Antonio Calcagni (Università degli Studi di Padova)*

Having valid methods, measures, and approaches is necessary for the research in Psychology to produce results that are valid and with concrete practical implications. The symposium aims to present new perspectives and methods in psychometrics, which are some examples of the research carried out in this field by young Italian researchers. The topics are heterogeneous and concern, among others, new analytical methods for estimating the frequency of results obtained through debatable intermediate analysis; a person-centered approach and Bayesian informative hypothesis testing in studying job demands and job satisfaction; new perspectives in the study of the well-known phenomenon of social desirability; and Item Response Theory methods for shortening tests. The presented perspectives and methods are expected to have promising implications for research and applications in Psychology.



## APPLICATION OF A NEW ANALYTICAL METHOD TO IDENTIFY THE NUMBER OF RESULTS OBTAINED THROUGH QUESTIONABLE INTERIM ANALYSES

*Francesca Freuli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento), Antonio Calcagni (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Luigi Lombardi (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento)*

Despite a growing interest in the so-called Questionable Research Practices and their impact on the replicability crisis, the traditional method to identify and estimate the implementation rate of these improper practices is based on a self-report questionnaire. This paper presents a new analytical approach for estimating the frequency of results obtained through Questionable Interim Analyses, overcoming some of the limitations inherent in self-report techniques.

## WORK CHARACTERISTICS AND SATISFACTION AT WORK IN THE HEALTHCARE SECTOR: A PERSON-CENTERED EXAMINATION USING BAYESIAN INFORMATIVE HYPOTHESIS TESTING

*Ivan Marzocchi (Dipartimento di Psicologia, Sapienza Università di Roma), Valeria Ciampa (Dipartimento di Psicologia, Sapienza Università di Roma), Ilaria Olivo (Dipartimento di Psicologia, Sapienza Università di Roma), Cristina Di Tecco (Dipartimento di medicina, epidemiologia, igiene del lavoro e ambientale, INAIL), Matteo Ronchetti (Dipartimento di medicina, epidemiologia, igiene del lavoro e ambientale, INAIL), Valerio Ghezzi (Dipartimento di Psicologia, Sapienza Università di Roma), Claudio Barbaranelli (Sapienza Università di Roma)*

Work characteristics may independently and jointly affect well-being, so that whether job demands energize or deplete employees depend on the resources available on the job. However, due to methodological reasons and the inclusion of variables lacking in occupational specificity, mixed results on their joint effects have emerged so far in literature. In this study, we adopted a person-centered approach and Bayesian informative hypothesis testing to (a) identify different patterns of interactions of job demands and resources in a sample of healthcare employees, and (b) determine the degree to which these patterns are associated with job satisfaction. We involved a sample of 1,513 employees and collected data on salient job demands and job resources, and job satisfaction. Results of the Latent Profile Analysis revealed four latent configurations: high strain-isolated (high demands, low resources), resourceless (mixed demands, low resources), resourceful (low demands, high resources) and active job (medium-high demands, high resources). These profiles were differently associated with job satisfaction: we found the highest support for the hypothesis stating that the active job profile was the most satisfied, while the high strain-isolated profile was the less satisfied.

## MEASURING SOCIAL DESIRABILITY IN PSYCHOLOGY: CONSEQUENCES AND CONTROL PRACTICES

*Elisa Menardo (Università di Verona), Roberto Cubelli (Dipartimento di Psicologia e Scienze Cognitive, Università di Trento - Early Career Researchers Network (E-CARE), Sezione di Clinica-Dinamica, Associazione Italiana di Psicologia), Giulia Balboni (Università degli Studi di Perugia)*

Social desirability is one of the most common sources of bias affecting the validity of experimental and survey research findings. Indeed, social desirability, or the propensity to give untrue answers to appear as a socially deserving person (Paulhus, 1991), can alter the measurement of psychological constructs with self-report questionnaires. Two different strategies can be adopted to control social desirability: 1) prevent or reduce, 2) detect and measure. The first strategy involves, for example, the use of forced-choice or randomized items; the second strategy includes scales for identifying and excluding potential simulators. A combination of prevention and detection methods offers the best choice available for controlling social desirability bias. Psychology researchers usually use prevention methods and only rarely include a scale for measuring SD in their research. The present work aims to describe the most widely used social desirability scales and show how the detection and exclusion of potential simulators can modify the results of psychological studies.

## ON THE NATURE OF EMOTIONS: DEFINING A THEORETICAL MODEL BASED ON DATA-MINING THROUGH CONFIRMATORY TETRAD ANALYSIS FOR PLS-SEM

*Paola Pasca (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento), Enrico Ciavolino (Dipartimento di Storia, Società e Studi sull'Uomo, Università del Salento)*

The psychological dimension of service experience is becoming increasingly important, and modern data science techniques allow its extraction even from atypical data, such as reviews provided by users on the web. Starting from these techniques and Google Maps data, an exploratory study developed a Customer Satisfaction model based on Plutchik's taxonomy of emotions, which accounts for the final rating attributed to restaurant services. This study seeks to assess and determine its nature (formative vs. reflective) through a statistical criterion: the Confirmatory Tetrad Analysis (CTA-PLS). CTA-PLS protects against model misspecification and allows to empirically verify whether the theoretical specification is supported by the data. Results seem to confirm a formative nature, where the first-order constructs represent emotionally connoted, yet differentiated aspects of the general service experience, which are in line with Plutchik's theory. CTA-PLS emerges as a useful statistical decision criterion for investigating the nature of measurement models.

## DON'T SAY CAT: NEW ITEM RESPONSE THEORY APPROACHES FOR DEVELOPING SHORT TEST FORMS

*Ottavia M. Epifania (Università Cattolica del Sacro Cuore - Università degli Studi di Padova), Pasquale Anselmi (Università degli Studi di Padova), Egidio Robusto (Università degli Studi di Padova)*

Given the detailed information provided at both respondent and item levels, Item Response Theory (IRT) models represent valuable tools for shortening tests. This contribution presents new IRT-based procedures for developing short test forms. These procedures are based on the information that each item provides in respect to different trait levels of interest (denoted as  $\theta$  targets), which are obtained by segmenting the latent trait continuum in either equal or unequal intervals. In a simulation study, new procedures were compared with the typical IRT procedure and with a random selection of items. Different latent trait distributions (normal, positively skewed, uniform) were considered as well. The new procedures outperformed the existing and the random ones in recovering central and peripheral regions of the latent trait continuum, particularly when the short test forms consisted of fewer items. Additionally, the tests obtained with the new procedures tended to be more informative than those obtained with typical and random procedures.

## ALTERNATIVE VIEWS: DIVERGENT THINKING AND VIEWPOINT CHANGE IN THE ELDERLY

*Proponenti: Maria Luisa Rusconi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo),  
Alessandro Antonietti (Università Cattolica del Sacro Cuore)*

The symposium presents 4 contributions highlighting how aging modifies some cognitive processes such as divergent thinking (DT) and temporal relocation of events. On the one hand, studies highlighted that temporal perspective can be modulated by aging: older people more accurately recall positive events than negative or neutral ones. The recollection of events may be also affected by the point of view from which the information is stored and the first-person perspective might enhance the accurate recollection of the event. On the other hand, an increasing number of studies suggests that DT can be a valuable support for active aging: thinking in a “divergent” and flexible way positively affects older people’s cognitive performance and psychological well-being. The first contribution will focus on the effects of valence and point of view on the temporal relocation of events with particular emphasis on age-related differences in a newly developed computerized task. The other three contributions will focus on DT: one correlational study investigated the relationships between creativity, well-being and cognitive reserve; two experimental studies tested a cognitive enhancement intervention based on structured DT exercises (CREC), adapted to healthy elderly subjects and MCI patients.

## THE EFFECTS OF AGING ON THE TEMPORAL RELOCATION OF EVENTS: A STUDY WITH DYNAMIC FIRST- AND THIRD-PERSON STIMULI

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Studies in the literature have shown how individual differences, as well as the different characteristics associated with events, can modulate the temporal relocation processes. The present study aimed to investigate how the different emotional valence and the different point of view (POV) of dynamic stimuli can influence the subsequent relocation of the same on a timeline. Furthermore, particular attention was given to age-related differences by comparing younger and older adults' performance to a newly developed computerized task. For this task, we selected a series of videos extracted from the database "Chieti Affective Action Video" (CAAV) with different valence (positive, negative, or neutral) and shot with two different POVs (first and third person). Participants were asked to watch three series of videos in three different experimental sessions, interspersed with a day of rest (coding phase). In the fourth experimental session, participants were asked to indicate in which of the previous three sessions they believed they had viewed each video (temporal relocation phase). Results showed that POVs and emotional valence of dynamic stimuli have different effects on the performance. In addition, it has been shown that age-related differences can modulate the accurate temporal relocation of the videos.

## PSYCHOLOGICAL WELL-BEING AND THE ELDERLY: THE ROLE OF CREATIVITY AND COGNITIVE RESERVE

*Francesca Garau (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Natale Salvatore Bonfiglio (Università di Pavia), Maria Pietronilla Penna (Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari), Maura Crepaldi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Virginia Maria Borsa (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Giulia Fusi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Laura Colautti (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore), Maria Luisa Rusconi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Alessandro Antonietti (Dipartimento di Psicologia, Università Cattolica del Sacro Cuore)*

The increasing longevity and quality of life of the elderly population guided many studies to analyze the psychological well-being (PWB) and protective factors for a healthy aging. Some studies have highlighted the protective function of cognitive reserve (CR) (education, leisure and work done), while others focused on the association between PWB and creativity (C) (the ability to find effective and strategic ways to cope with everyday challenges). The aim of this study was to investigate the relationship between PWB, C and CR in a group of 108 subjects (Mage:72.9;SD:6.4) through the use of self-report questionnaires. The influence of some sociodemographic variables and executive functions on this relationship was also investigated. Positive correlations were found between PWB and CR. Through a Linear Regression analysis it was found that CR is predictive of PWB. In addition, only education level seemed to negatively increase the predictivity of the regression model. No correlations were found between PWB and C. This study makes advancements on the study of the relationship between PWB and CR and point out the need for further investigation to examine the role of protective factors in successful aging



## CREATIVITY IN EVERYDAY LIFE CHALLENGES: A COGNITIVE TRAINING TO FOSTER CREATIVE THINKING IN HEALTHY OLDER ADULTS

*Laura Colautti (Università Cattolica del Sacro Cuore), Virginia Maria Borsa (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Maura Crepaldi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Giulia Fusi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Cecilia Segatta (Università di Bergamo), Jessica Gianni (Università di Bergamo), Elena Maierna (Università Cattolica del Sacro Cuore), Paola Iannello (Università Cattolica del Sacro Cuore), Alessandro Antonietti (Università Cattolica del Sacro Cuore), Maria Luisa Rusconi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

The present study aims at investigating the potential cognitive and psychological effects of creative thinking abilities in older adults, through an online group training program - Creativity in Everyday life Challenges (CREC). CREC was fully designed with exercises based on the main mental operations involving creativity to enhance divergent thinking and cognitive flexibility in the elderly. It is assumed that these abilities cover a key role in aging since they suggest new and functional strategies to cope with daily problems, supporting older adults' wellbeing and autonomy. The training includes 10 sessions to be carried out in small groups twice a week, each lasting about 60 minutes. Before and after the training, a cognitive battery was administered in individual online sessions to assess creative thinking, specific cognitive abilities related to creativity, and emotional states. Preliminary results concern a sample of 21 healthy older adults (sex: 5 male; age: 67.71 yrs.  $\pm$  5.07; education: 14.38 yrs.  $\pm$  3.72), showing an improvement in cognitive abilities and emotional states after the creative training. These preliminary results suggest that creativity can be a useful resource for promoting healthy aging.

## THE EFFECTS OF A CREATIVITY TRAINING (CREC) IN PATHOLOGICAL AGING: PRELIMINARY ANALYSES

*Giulia Fusi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Marina Zanetti (Fondazione Richiedei), Chiara Salvi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Luca Rozzini (Università di Brescia), Maura Crepaldi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Virginia Maria Borsa (Dipartimento di Scienze Umane e Sociali, Università di Bergamo), Maria Luisa Rusconi (Dipartimento di Scienze Umane e Sociali, Università di Bergamo)*

Creative abilities, being partially spared in patients with Mild Cognitive Impairment (MCI), could contribute to a better cognitive reserve of these subjects, protecting them from cognitive decline. Effectiveness of cognitive/creative training has been proved by meta-analytic research. However, few creativity training programs have been designed and implemented for these patients. The present study investigated the possible beneficial effects of an individual 10-sessions training (CREC, CReativity in Everyday life Challenges), based on divergent thinking exercises, in a sample of 15 MCI patients (6 men; age:  $78.1 \pm 3.18$ ; education:  $7.73 \pm 6.50$ ). Other six patients (2 men; age:  $75.5 \pm 6.32$ ; education:  $6.50 \pm 1.64$ ) were assigned to an active control group. Specific cognitive functions, divergent thinking skills, psychological and well-being variables were assessed at two different time points: before and after the training sessions. Preliminary results showed that CREC improves patients' performance in specific cognitive domains. Notwithstanding, only marginal improvements were observed in the psychological variables. These results suggest that creative thinking could be a useful resource against cognitive decline in the elderly.

# DECISION MAKING ABOUT COVID-19 VACCINATION

*Proponente: Marta Caserotti (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

This symposium aims to investigate the factors that influence the decision to get vaccinated against COVID-19 from different perspectives. Contribution by Caserotti et al. investigates the role of motivations for or against vaccination, in a representative sample of 1,689 Italians. Tentori et al. (N=1,800) shows that the efficacy of vaccines is often misinterpreted and that this could reduce people's vaccination intention. The efficacy and safety of the COVID-19 vaccine are also captured in Pravettoni et al. 's work, suggesting that low levels of confidence in vaccine efficacy, safety, and collective responsibility reduce vaccination intention. With a longitudinal study (N=2,277), Savadori et al. highlights the role that scientific and medical experts can play as persuasive communicators to encourage vaccine adoption. Finally, the work by Gavaruzzi et al. presents an examination of the vaccination decision of pregnant/breastfeeding women (N=1,104), showing that concerns for the baby weigh more heavily than those for the mother, especially during pregnancy. The works presented in the symposium highlight the importance of studying decision-making processes in applied contexts, offering perspectives and strategies to future communications in critical emergency situations.

## THE WEIGHT OF MOTIVATION IN THE CHOICE TO VACCINATE AGAINST COVID-19

*Marta Caserotti (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Teresa Gavaruzzi (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Paolo Girardi (Dipartimento di Scienze Ambientali, Informatica e Statistica, Università Ca' Foscari Venezia), Roberta Sellaro (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Enrico Rubaltelli (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova), Alessandra Tasso (Dipartimento di Studi Umanistici, Università degli Studi di Ferrara), Lorella Lotto (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Although COVID-19 vaccines are an effective tool to reduce the spread and mortality caused by COVID-19, many people are still hesitant. We investigated the effect of participants' motivations on their choice to vaccinate or not in a representative sample of 1,689 Italians (collected Mar-Apr 2021). While previous studies offered lists of reasons to evaluate, we asked people to freely report up to 3 reasons for and against COVID-19 vaccines, and the associated weight (1=Not Important, 5=Extremely). Both in favor and against motivations were classified into 7 categories. Model1 studied the effect of motivations on the intention to get vaccinated in participants waiting for vaccine offer (N=1297). Results showed that strongly negative motivations influenced the choice to get vaccinated less than strongly positive motivations, also for those who report reasons both for and against. Model2 considered those who already made a decision (N=392). Positive motivations influenced the decision to get vaccinated more strongly than negative ones, equal number of motivations. The study highlights motivations that most strongly influence the vaccination (also considering the interaction with individual differences), suggesting that different perspectives need to be used with hesitant individuals.

## THE MISUNDERSTANDING OF VACCINE EFFICACY AND ITS IMPLICATIONS ON VACCINE HESITANCY

*Katya Tentori (Centro Interdipartimentale Mente/Cervello, Università di Trento), Andrea Passerini (Dipartimento di Ingegneria e Scienza dell'Informazione, Università di Trento), Benjamin Timberlake (Centro Interdipartimentale Mente/Cervello, Università di Trento), Stefania Pighin (Centro Interdipartimentale Mente/Cervello, Università di Trento)*

In our presentation, we will discuss the results of three online behavioral experiments in which we investigated whether laypeople grasp the meaning of vaccine efficacy. These experiments involved a total of 1,800 participants in the UK and Italy and showed that the efficacy of vaccines is often misinterpreted as the non-incidence rate among the vaccinated. We will argue that this error leads to a systematic overestimation of the probability of developing a disease when vaccinated and, accordingly, we will provide evidence that this could undermine the general positive attitude toward vaccines, as well as attenuating the intention to get vaccinated.

## PSYCHOLOGICAL PREDICTORS OF COVID-19 VACCINE HESITANCY

*Gabriella Pravettoni (Dipartimento di Oncologia ed Emato-Oncologia, Università di Milano Statale - Applied Research Division for Cognitive and Psychological Science, Istituto Europeo di Oncologia IRCCS Milano), Barbara Poletti (Neurologia e Stroke Unit, IRCCS Istituto Auxologico Italiano), Ketti Mazzocco (), Roberta Ferrucci (Dipartimento di Scienze della Salute, Università degli Studi di Milano Statale - Unità di Neurologia, ASST Santi Paolo e Carlo Milano)*

The study aims to investigate the psychological constructs related to COVID-19 vaccine hesitancy distinguishing between variables directly associated with people's behaviour and those that predict the psychological antecedents. Participant's willingness to be vaccinated against COVID-19 and psychological variables including the 5C psychological antecedents of vaccination (confidence, complacency, constraints, calculation and collective responsibility) were assessed in an online survey. Psychological antecedents predict hesitancy. More specifically high hesitancy was predicted by high levels in information searching and cost-benefits estimates (calculation), and low levels in confidence in vaccine effectiveness and safety, complacency, and collective responsibility. Risk perception and personal dispositions (conscientiousness, agreeableness, locus of control) predict differently the psychological antecedents of hesitancy. Finally, the presence of conspiratorial thoughts was a negative predictor of psychological antecedents. COVID-19 vaccine efficacy, safety, and usefulness at both the individual and community level should be clearly addressed by health communications, empowering individuals in taking responsibility for one and others' health.

## INCREASING COVID-19 VACCINATION THROUGH DEBUNKING MESSAGES USING SOCIAL NORMS AND EXPERT ENDORSEMENT

*Lucia Savadori (Dipartimento di Economia e Management, Università di Trento), Piero Ronzani (Università Vita-Salute San Raffaele Milano), Folco Panizza (Università Vita-Salute San Raffaele Milano - Scuola IMT Alti Studi Lucca), Carlo Martini (Università Vita-Salute San Raffaele Milano - University of Helsinki, Finland), Lucia Savadori (Dipartimento di Economia e Management, Università di Trento), Matteo Motterlini (Università Vita-Salute San Raffaele Milano)*

Experts such as scientists and doctors are generally trusted by the public. In a pre-registered longitudinal experiment, we investigated whether debunking messages using social norms endorsed by experts could increase the intention to vaccinate. Debunking messages are corrective messages that affirm that the previous message or belief was misinformation. We studied 2,277 Italian individuals in a 7-waves longitudinal study during the main phases of the COVID-19 vaccination campaign. The experimental group received a series of messages saying that the majority of medical researchers contacted for an expert opinion agreed with the debunking statement. The control group received the same set of messages, but the messages were endorsed by a non-specified majority of poll respondents. The results did not show an increase in vaccination behavior. However, individuals in the experimental group had a higher intention to vaccinate and a higher positive opinion of the vaccine's preventive effectiveness. The more debunking messages participants received, the greater the increase in vaccination intention in the experimental group compared to the control group. Our findings imply that scientific and medical experts can act as persuasive communicators for incentivizing vaccine uptake.

## DECIDING TO GET VACCINATED AGAINST COVID-19 WHILE PREGNANT OR BREASTFEEDING: THE ROLE OF PERCEIVED BENEFITS AND RISKS FOR THE MOTHER AND THE BABY. A CROSS-SECTIONAL STUDY IN ITALY

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Background: Deciding to immunize while pregnant or breastfeeding involves weighing the benefits and risks for both mother and baby, but their interplay is unclear from the literature. Methods: Online data collection during summer 2021 (when no recommendation was yet available for COVID-19 vaccination in pregnant and breastfeeding women). Sample: 1104 participants completed the study. The impact of the overall risks-benefits perception and the relative weight of the risks-benefits ratio for the baby over that for the mother was assessed on COVID-19 vaccination status (yes, no), willingness to vaccinate (WTV) in the current status (pregnant/breastfeeding), and baseline WTV (if not in current status). Results: The results showed that: 1) vaccine status and WTV are predicted by the overall risks-benefits ratio, 2) the concerns for the baby weigh more than those for the mother, 3) especially during pregnancy, 4) vaccine hesitancy is greater during pregnancy but it is temporary, 5) COVID-19 risk perception predicts WTV. Discussion: Shedding light on the interplay of perceived benefits and risks for the mother and baby is essential to support informed and shared decision making about immunization during pregnancy or breastfeeding.



# THE CREDIBILITY OF PSYCHOLOGY IN THE COURT: THE SCIENTIFIC CRITERIA OF THE FORENSIC NEUROPSYCHOLOGY (WITH THE COOPERATION OF SOCIETÀ DI PSICOLOGIA GIURIDICA-SPG)

*Proponenti: Antonietta Curci (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro'), Giuseppe Sartori (Università degli Studi di Padova)*

In the last years forensic psychology has undergone a credibility crisis. In the Italian context, recent rulings have undermined the theoretical and methodological fundamentals of the discipline with a preference for a medical approach which seems to have a stronger epistemological status. On the other hand, ideological positions have contaminated the scientific debate on issues crucial for social policy and security, raising doubts in the general public about the scientific scope of forensic psychology. Finally, academic programs in psychology have often given limited considerations to the neuropsychological approach and related methods, which, by contrast, lead both scientific research and professional practices on forensic themes in international contexts. In the present symposium we will provide a contribution to the debate on the scientific applications of psychology and neuropsychology to the legal arena, by focusing on “hot” topics such as repressed memories, training of forensic psychologists working with violence victims, validity of forensic assessment, and neuroscientific evidence in criminal trials. On this last issue, the contribution of a law scholar will be included to provide a different perspective on the interface between scientific forensic psychology and law.

## TRAUMATIC MEMORIES, PTSD, EMDR: THE ROLE OF SCIENTIFIC EVIDENCE

*Giuliana Mazzoni (Sapienza Università di Roma), Gianmarco Convertino (Sapienza Università di Roma), Michela Marchetti (Sapienza Università di Roma)*

Recently, in Italy, a peculiar situation is evidence in the forensic field. On one hand magistrates with increasing frequency request the evaluation of psychology experts, while on the other there still seems to be a lack of awareness of the scientific value of results in psychological research. As a matter of fact, results in psychological research should have the same dignity as other scientific disciplines' results, such as biology or medicine. In this context, judges tend to rely to a great degree on psychologists' reports, while one still finds psychological statements in sentences revealing a naïf understanding of psychological concepts and a substantial lack in knowledge of the scientific literature. Exemplary instances of this state of matters, are the concepts of memory for traumatic events, Post-Traumatic Stress Disorder (PTSD) diagnosis and the Eye Movement Desensitization and Reprocessing (EMDR) technique, one of the most widespread treatments in PTSD. By using scientific data, the EMDR example will be treated more in depth, highlighting that EMDR could be a very effective method in appropriate situations and modalities, but it also can be a very problematic method when conditions and/or aims are inappropriate.

## WHAT DO SCHOLARS SAY ABOUT REPRESSED MEMORIES? A SCIENTOMETRIC ANALYSIS OF PEER-REVIEWED PUBLICATIONS

*Fabiana Battista (Catholic University of Leuven, Belgium - Maastricht University, the Netherlands), Henry Otgaar (Catholic University of Leuven, Belgium - Maastricht University, the Netherlands), Ivan Mangiulli (Università Cattolica di Lovanio, Belgio - Università degli Studi di Bari 'Aldo Moro'), Lawrence Patihis (University of Portsmouth, UK), Olivier Dodier (University of Nimes, France), Antonietta Curci (Dipartimento di Scienze della Formazione, Psicologia, Comunicazione, Università degli Studi di Bari 'Aldo Moro')*

Recent studies suggest that the debate on the occurrence of repressed memories continues nowadays. To better comprehend the evolution of this debate, this project has the goal to present a series of scientometric analyses on publications on repressed memories. These publications have also been reviewed to identify the different scholars' positions in the debate. In particular, scientometric analyses on (i) countries', affiliations', journals, and authors' performance, (ii) articles' and authors' citations and co-citations, and (iii) on authors' keywords were conducted on 416 articles published from 1969 to 2022. The critical review aimed to detect whether the authors had a supportive, sceptical, or neutral position with regard to the existence of repressed memories and what were the justifications provided to support their opinion. We found three peaks of publications (1994-2000; 2003-2009; 2012-2021) and that 39.9% of authors provided support to the idea of repressed memories compared to the 29.3% of sceptical scholars. Moreover, we detected that 21.1% of the most recent publications continue to corroborate the existence of this phenomenon. Finally, we showed that recently the concept of repressed memories has also been describing with the expression dissociative amnesia.

## FORENSIC PSYCHOLOGICAL ASSESSMENT: WHICH CREDIBILITY?

*Paolo Roma (Dipartimento di Neuroscienze Umane, Sapienza Università di Roma), Marco Colasanti (Dipartimento di Scienze Psicologiche, della Salute e del Territorio, Università degli Studi G. d'Annunzio di Chieti-Pescara), Silvia Biondi (Sapienza Università di Roma)*

Psychological assessment has been employed for decades in a variety of settings, from personnel selection to forensic contexts. However, response biases (i.e., the tendency to respond in a way that interferes with accurate self-presentation; Paulhus, 2002) remain a fundamental issue (Helmes et al., 2015) and can be both intentional and unintentional. When intentional, respondents might try to deliberately offer a distorted self-image for personal gains: on one hand, they can exaggerate or fabricate psychological symptoms to present themselves in a worse light; on the other hand, they can endorse desirable traits and reject undesirable ones to present themselves in a favourable light. Especially in forensic settings, this phenomenon has an alarming prevalence, estimated to be up to 74% for fake-good (Baer & Miller, 2002) and 15±15% for malingering (Young, 2014). The possibility that the validity of psychological evaluations is so often threatened might pose a very serious problem to forensic psychology's credibility. Considering the importance of precise and believable psychological assessment in the high-stake contexts in which forensic psychology operates, it is of paramount importance to be able to determine whether examinees are distorting their responses.

## THE PERCEIVED RELIABILITY OF PSYCHOLOGY IN THE COURT: TRAINING AND METHODOLOGIES

*Anna Maria Giannini (Sapienza Università di Roma), Giulia Lausi (Sapienza Università di Roma),  
Emanuela Mari (Sapienza Università di Roma), Jessica Burrai (Sapienza Università di Roma)*

Psychology is increasingly finding room in the Courtroom and, broadly, in the justice system, thanks to the new amendments to the penal code, such as the «Codice Rosso», a new procedure for victims of abuse and domestic violence. Hence, referring to evidence-based methodologies to train psychologists working in forensic contexts is gaining utmost importance. We introduce an experience of shared methodologies, which has been developed by a network of psychologists, law enforcement, workers of the Public Prosecution office. New guidelines for hearing vulnerable victims and for preventing secondary victimisation, developed within this network, will be presented and discussed.

## FROM THE JURIDICAL POINT OF VIEW

*Ombretta Di Giovine (Consigliera Corte di Cassazione)*

The troubled relationship between law and scientific psychology depends on the difficulty that judges always have when they are called to exercise control over external knowledges. More fundamentally, it also depends on the need, unavoidable by criminal system, to assume as its recipient a model of rational agent.

# THE EMOTIONAL BODY: ON THE COMPLEX RELATIONSHIP BETWEEN BODY AND EMOTIONS AND HOW THEY INFLUENCE EACH OTHER

*Proponente: Michelle Giraud (Università degli Studi di Milano-Bicocca)*

Both classical and more recent theories of emotions have proposed a more active role of the body in shaping the generation and perception of emotions. Indeed, the awareness of bodily signals (e.g., interoception) can influence emotion processing, in turn affecting different aspects of perception, cognition and behaviour. On the other hand, emotions appear to be tightly linked to changes in bodily states, leaving the debate about the bidirectional relationship between emotions and the body works still open. The purpose of this symposium is to explore this relationship and highlight how the body and emotions influence each other and can modulate perception, action, as well as social interactions. Giraud will show that metaphorical expressions, such as 'feeling touched' are grounded in tactile and motor activity, as evidenced by the activity of the somatosensory and motor cortex during an fMRI task. Palermo will show the consequences of such embodied feelings in the construction of a healthy body representation. Mello and Silvestri will conclude, respectively, by investigating the role that affective touch has in influencing and preparing the body for motor behaviour (Mello), and the individual differences that predict the beneficial role of affective touch in emotion perception.

## MAPPING THE EMOTIONAL HOMUNCULUS: AN FMRI STUDY

*Michelle Giraud (Università degli Studi di Milano-Bicocca), Liana Palermo (Università degli Studi 'Magna Græcia' di Catanzaro), Manuel Mello (Sapienza Università di Roma), Valentina Silvestri (Università degli Studi di Milano-Bicocca)*

Emotions are commonly associated with bodily sensations and these expressions are not just ways of saying, as studies have shown that emotions are related to specific body parts, irrespective of cultural background. The fact that emotions are felt in specific body parts suggests that not only typical subcortical brain regions (e.g., amygdala) may be recruited during the subjective emotional experience, but also cortical regions that commonly respond to tactile and motor experience (Primary Somatosensory and Motor cortex). In this study, we investigate the extent to which emotions represent an embodied experience by constructing an 'emotional homunculus' on S1 and M1. To this end, we used a somatosensory and motor functional localizer and emotional recall task during the fMRI scanning and 26 healthy female participants were enrolled in the study. To observe whether felt emotions activate S1 and/or M1, we compared BOLD activity assessed during the emotional recall task with the activity set during the somatosensory and motor localizer. Preliminary analyses showed that tactile and motor stimulation allowed mapping both S1 and M1 and that all the five emotions selected activate the specific body parts, overall suggesting that emotions are strongly grounded in our bodily experiences.



## THE ROLE OF INTEROCEPTION IN SHAPING HIGHER-ORDER BODY REPRESENTATIONS: NEUROPSYCHOLOGICAL AND LIFESPAN DEVELOPMENTAL APPROACHES

*Liana Palermo (Dipartimento di Scienze Mediche e Chirurgiche, Università degli Studi 'Magna Græcia' di Catanzaro)*

In identifying the factors that shape higher-order body representations (BR), numerous studies have exclusively focused on bodily signals originating from the outside of the body (i.e., exteroceptive bodily signals). However, recent BR research is progressively targeting interoception (i.e., the sense of the physiological condition of the body) as an essential input source to bodily cognition. Despite this increasing interest, critical questions remain unanswered. I will present studies that have explored interoception, action-oriented, and nonaction-oriented BR in healthy individuals across the lifespan and after brain damage. In healthy individuals, I will suggest the presence of age-related differences in the association between interoceptive processing and BR across the lifespan. In individuals with unilateral brain damage, interoceptive sensibility levels seem to predict body part localization difficulties. I will propose that the disconnection of specific tracts (e.g., fronto-insular tracts) could account for such a finding. In discussing these results, I will point to the theoretical and clinical relevance of the focus on the internal bodily feelings to increase BR understanding in both healthy and disordered states.

## MOTOR FACILITATION FOLLOWING PLEASANT SOCIAL TOUCH OBSERVATION

*Manuel Mello (Sapienza Università di Roma - Istituto Italiano di Tecnologia), Sebastian Gaigg (City, University of London, UK), Beatriz Calvo-Merino (City, University of London, UK)*

Recent neuroscientific evidence suggests that others' tactile experiences are automatically mapped onto our own sensorimotor system (Keysers et al., 2010; Peled-Avron and Woolley, 2022). Within the pain empathy literature, a motor facilitation effect on reaction times was recently reported contingent to the observation of others' pain (e. g., a needle penetrating a hand) (Morrison et al., 2007; Galang et al., 2017, 2021). In the present work, we sought to extend this evidence to the pleasant touch domain by demonstrating that the observation of pleasant social touch on others is associated with a facilitation of overt behavioral responses in the self. Utilizing a Go/No-go task, we found that participants responded faster and with higher accuracy to a Go stimulus following pleasant social touch observation (compared to no-touch conditions). Furthermore, repeated exposure to pleasant social touch led to faster reaction times as well. We postulate that the activation of embodied sensorimotor representations underlies the motor facilitation effect found in the present work, and we plan to investigate its neural correlates/dynamics utilizing brain electrophysiology – e. g., readiness potential (Campagnoli et al., 2015), Rolandic rhythms de-/synchronization (Schirmer et al., 2018).

## INDIVIDUAL DIFFERENCES MODULATE THE EFFECTS OF AFFECTIVE TOUCH DURING EMOTION REGULATION

*Valentina Silvestri (Dipartimento di Psicologia, Università degli Studi di Milano-Bicocca)*

Recent evidence has documented the beneficial role of affective touch (AT, i.e., a slow and pleasant type of touch, likely mediated by CT fibers) in modulating socio-emotional functions, such as the feelings of social exclusion. We here explored whether the AT effectively provides positive outcomes in adults by influencing emotion regulation and observed the impact of individual traits, such as empathy, high-sensitivity and sensitivity to AT itself. Adult women were stimulated on their forearm through AT or tapping during the observation of emotionally arousing (e.g., dead bodies) or neutral (e.g., bicycles) images while measuring their skin conductance response and asking to rate each image. AT reduced the arousal and the negative perception of highly emotional stimuli only in individuals with high empathic traits and who reported AT to be pleasant. Conversely, AT had a detrimental effect on individuals particularly sensitive to sensory stimulation, in that they perceived AT as being less pleasant than the tapping, which in turn led them to report the emotional images to be more disturbing when associated with AT than seen alone. Our results reveal that AT, at least in adults, has a double nature and might prove beneficial only for individuals with specific traits.

# AGING 1

## COGNITIVE–COGNITIVE DUAL-TASK ASSESSMENT IN HEALTHY AGEING

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Multitasking is a ubiquitous necessity which is becoming more and more fundamental in our daily routines. Motor-Cognitive Dual-tasking has shown good diagnostic potential for ageing-related cognitive and motor pathologies. Here we investigated dual-task interference (DTi) between two cognitive tasks in healthy older adults. In the first study, we investigated the impact of a phonemic fluency on image recognition in 60 adults (50-77 y/o) and correlated DTi with cognitive flexibility and efficiency measures. In the second study we investigated the impact of a sustained attention on image recognition in 300 adults (50-89 y/o). Results show age-related deterioration in memory and attention, but when controlling for floor/ceiling effects, the DTi across age was stable. Finally, individuals with a high global DTi were also those who scored lower than peers on cognitive tests. In conclusion, while maintaining the rigour of the lab, dual-task paradigms mimicking everyday demands are promising tools for cognitive assessment.

## STRATEGIC MEMORY TRAINING IN OLDER ADULTS: COULD BOOSTER SESSIONS SUPPORT LONG-TERM BENEFITS?

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Booster sessions, additional training sessions provided between the post-test and the follow-up sessions, seem to promote long-term training gains in older adults. This study aimed to assess the efficacy of a strategic memory training for typically-aging older adults in promoting benefits in both lab-based and more ecological outcomes; in particular, we examined whether booster sessions could favor long-term training gains. Thirty-eight community-dwelling older adults were divided into two groups, both involved in a strategic memory training program on the use of effective memory strategies (mental imagery, method of loci, face-surname association). One of these two groups received, 4 months after the training completion, 3 additional booster training sessions. Training benefits on lab-based and ecological word-list recall tasks, a working memory measure (Listening Span Task), a Face-Surname Association Test, and an objective performance-based task (the Everyday Problems Test) were examined; maintenance effects were planned to be assessed after 4 and 10 months. Preliminary results show short-term training gains and transfer effects, which we expect to be maintained at follow-up, particularly in the boosted group.

## EXPLICIT AND IMPLICIT TIMING IN HEALTHY AND PATHOLOGICAL AGING

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This study aimed to test two common explanations for the general finding of age-related changes in temporal processing. In explicit timing tasks, participants are overtly informed about the temporal nature of the task whereas in implicit timing tasks no explicit instructions to process time are provided. Older adults demonstrated difficulty in processing temporal information as compared to younger adults because of their reduced cognitive functioning. These explanations have been mostly observed in explicit timing tasks but less is known about age-related differences in implicit timing. The present study includes 85 healthy and pathological older participants that completed explicit (time bisection) and implicit (foreperiod) timing tasks. Participants' age and general cognitive functioning were used as continuous variables to explain performance on explicit and implicit timing tasks. Results showed a clear dissociation between the effects of healthy cognitive aging and pathological cognitive decline on the processing of explicit and implicit timing. These findings carry important theoretical and practical implications by providing the first experimental evidence that processing of implicit, but not explicit, timing is differentially affected in healthy and pathological aging.

## VISUAL ACCESS TO GREENSPACE: THE MEDIATING ROLE OF THE PERCEIVED STRESS ON GLOBAL COGNITION IN AGEING

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The contact with greenspace has been associated with improved well-being and cognitive functioning. However, available evidence on the beneficial role of contact with greenspace in decelerating cognitive ageing in older adults is still inadequate and non-conclusive. We conducted a study to (a) investigate the association between visual access to greenspace and global cognition, and (b) explore the possible mediating role of the perceived stress in this association. Structural equation models were performed on 605 healthy older adults, ranging between 55-90, and residing in the Metropolitan Area of Bari, Apulia. Results indicated that the visual access to greenspace was significantly and positively associated with the global cognition and with the perceived stress, but the mediating role of perceived stress was not found. Our findings suggested a key role of contact with nature and emphasized the relevance of urban greenspace in the prevention of cognitive ageing, as well as a linkage between perceived stress and cognitive performance. Policy makers and stakeholders should take into account these findings in order to develop applications in several fields, such as nature-based solution in urban planning for the age-friendly urban cities.



## MEMORY TRAINING INTERVENTIONS TARGETING METACOGNITION FOR OLDER ADULTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Memory training programs have long been recognized to prevent, or at least delay age-related cognitive decline, and promoting quality of life in older age. No studies have examined the efficacy of memory training interventions targeting metacognition in improving memory and cognitive functioning, and psychological well-being in healthy older adults. Here we present a systematic review and meta-analyses on memory training studies targeting metacognition. Studies were searched in the PsycInfo, PubMed, and Scopus databases. Subgroup meta-analyses for each type of training (metacognitive training [MT]; metacognitive+strategy training [MST]) were performed using random effects models. Of 3,487 articles, 24 studies were included (N=2,762 older adults; age range: 63-87 years). MST and MT reported improvements in memory, metacognitive beliefs, strategy use, and memory self-efficacy. MST also showed improvements in psychological well-being. The methodological quality of most studies was limited. In conclusion, interventions targeting metacognition (alone or combined with memory strategy training) show evidence of efficacy in supporting older adults' memory and metacognitive functioning. Further studies needed to confirm the benefits of such -metacognitive- training in the older people.

# LANGUAGE 1

## ASSESSING CROSS-LINGUISTIC REPLICABILITY AND GENERALIZABILITY OF NATURAL LANGUAGE PROCESSING (NLP) MARKERS IN SCHIZOPHRENIA

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Incoherent speech is a distinctive linguistic features of schizophrenia. Natural language processing (NLP) provides automated ways for measuring incoherent speech, and for developing speech markers of the disorder. However, the scientific and clinical impact of NLP findings depends on their replicability and generalizability across samples and languages, which we systematically assessed in the present study. We collected a Danish, German, and Chinese cross-linguistic dataset involving transcripts from 187 participants with schizophrenia and 200 controls. Relying on this corpus, we derived 14 previously published NLP coherence measures, and tested between-groups differences for cross-linguistic generalizability. We found that only 1 coherence measure, i.e. sentence-level coherence, robustly replicated across all languages; instead, for the other measures we found only partial replication and several language-specific effects. Our results show that NLP results of reduced semantic coherence in schizophrenia have limited generalizability across different languages and measures. We argue that automated NLP measures are promising, but we need to combine current exploratory research with more rigorous tests of reproducibility and generalizability across samples, tasks and languages.

## WRITTEN COMPOSITION SKILLS IN UNIVERSITY STUDENTS WITH DYSLEXIA

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We studied the compositional written skills in adults with Developmental Dyslexia (DD) examining qualitative and quantitative characteristics of their texts as well as writing errors following a fine-grained analysis. Eighteen dyslexic participant (mean age= 23.36), selected after a screening of reading and writing skills in university students, were examined and compared to a group of fourteen control normal readers (mean age= 25.42). Participants included in the dyslexic sample scored below at least 1.65 SD for speed or accuracy on standardized reading screening test. Writing abilities were examined through a written composition task. Dyslexic participants produced text qualitatively worse and with more subordinate sentences with respect to those of control group. Texts produced by dyslexic also contain more misspelled words in comparison to production written by typical readers. The errors are mainly phonologically plausible, revealing a higher difficulty in lexical spelling procedures. In general, the writing composition skills of adults with dyslexia reveals qualitatively worse writing proficiency, associated with spelling difficulties characterized primarily by an inefficient use of lexical spelling procedure.

## CONCEPTUAL REPRESENTATION AND GROUNDING IN EARLY DEAF INDIVIDUALS

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Conceptual representation is informed by both linguistic and perceptual experience. Does the semantic system reorganize when one of the sensory modalities is absent, or can this be compensated by the contribution of linguistic information? We investigated this issue by assessing the perceptual intuition of words in early deaf individuals. We collected perceptual strength norms for 200 Italian words. For each item, participants (N = 37) were instructed to evaluate the extent to which they could experience that word through each of the five senses on a 1-5 scale. Results show a weaker contribution of the auditory modality as compared to the hearing population (data: Vergallito et al., 2020), but no overall decrease of the reported perceptual strength. We also observed a greater involvement of the other sensory modalities and a decrease in modality exclusivity, suggesting that words were experienced as more multisensory compared to hearing controls. The organization of the semantic system seems to be affected by the lack of acoustic input mainly in terms of increased multisensoriality. Notably, although decreased, the auditory modality does not disappear from explicit evaluation of perceptual strength, suggesting that auditory information is still represented in the semantic system.

## IMAGEABILITY AND CONCRETENESS RATINGS IN BLIND PEOPLE: THE ROLE OF DIRECT EXPERIENCE IN PERCEPTUAL JUDGMENTS

*Marco Petilli (Università degli Studi di Milano-Bicocca)*

Embodied literature assumes that perceptual properties of concepts can be grasped only via direct sensory experience. However, recent studies downscale the role of sensory experience by showing a contribution of language in providing all necessary information to extrapolate “perceptual” representations even for not directly experienced concepts. To further investigate this issue, we asked whether visual intuitions about concepts are achieved when visual experience is absent. To this aim, we considered concreteness and imageability intuitions in blind and sighted people and tested whether these judgments are predicted by visual experientiability of concepts, i.e. an estimate approximating how frequently an object can be potentially seen in daily experience. Results indicated that visual experientiability predicts perceptual intuitions not only in sighted but also in blind individuals. This indicates that direct visual experience does not play a critical role: even when direct experience is missing, visual properties of objects are estimated according to their degree of visual experientiability. This evidence suggests that perceptual judgments are introspection/abstraction tasks invoking high-level conceptual knowledge not necessarily acquired via subjective perceptual experience.

## MARKERS OF LITERACY VULNERABILITIES IN ADULT WITH DYSLEXIA

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The study aims at evaluating the literacy difficulties in adults with developmental Dyslexia. Participants were selected after a screening of reading abilities in university students. Subjects included in the dyslexic sample scored below at least 1.65 SDs for speed or accuracy on a standard reading passage test. The study involved 34 adults (mean age 25.4): 20 with dyslexia and 14 normal readers. At a word and nonwords reading test the difficulties of dyslexic were characterized by a speed more than accuracy deficit. Dysfluency was confirmed by a lower performance of dyslexic respect to controls in the Oneminute reading test (experimental task). The performance at an orthographic judgment task, revealed major difficulties in detecting phonologically plausible errors in dyslexic respect to controls, but their performance was normal in judging errors inserted in regular orthography words for which a sublexical reading procedure is sufficient. Finally dyslexic group showed a spelling deficits, with a lower performance in writing a passage and single words, with worst performers in articulatory suppression condition. Overall data confirm the persistency of reading and spelling fragilities in adults with developmental dyslexia, while assuming distinctive characteristics.

# METHODS 1



## EXPLORING THE MOTIVATIONAL CORE OF HONESTY AS A PERSONALITY TRAIT

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A comprehensive definition of Honesty, as a human characteristic, should reflect not only a set of specific behaviors, but also a set of goals. Previous studies connecting personality and goals focused primarily on Big Five traits, which do not encompass honesty, thus the motivational underpinnings of honesty are currently unexplored. The aim of this study was thus to identify a set of goals related to different aspects of this trait. First, adopting a psycho-lexical approach and expert judgement, we identified a set of 30 adjectives (out of an initial pool of 122) describing behaviors relevant for honesty and its facets. Second, we asked 250 participants to write goals that they ascribed to behaviors described by each adjective. The resulting corpus included 9000 responses and was analyzed relying on a combination of natural language processing, independent-rater judgment, network analysis, and clustering techniques. As a result, we identified the major goals related to (dis)honesty and its facets, as well as a set of main features of each goal. Having available a taxonomy of goals related to honesty is crucial to develop assessment of the motivational bases of honesty, as well as to implement paradigms aimed at elucidating the motivational processes of this trait.

## A BRIEF VERSION OF TAS-20: APPLICATION OF RASCH'S MODEL IN A SAMPLE OF ADOLESCENTS

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The TAS-20 is currently the most widely used instrument in adults for measuring alexithymia, an affective-cognitive disorder characterized by a particular difficulty in identifying and communicating one's emotions (Nemiah & Sifneos, 1970). The TAS-20 is a self-assessment questionnaire consisting of 20 items to which subjects respond through a 5-point Likert scale, from "not at all agree" to "very agree" and consists of three subscales that reflect the three main aspects of the construct of Alexithymia: 1) Difficulty Identifying Feelings; 2) Difficulty Describing Feelings; 3) Externally Oriented Thinking. Subjects with scores equal to or greater than 61 are considered clearly alexithymic, those with scores equal to or less than 50 not alexithymic, with an intermediate area between 50 and 60. The main objective of this work is to produce a brief version of the instrument through the application of Rasch's model in order to maximize trait homogeneity and to allow for a significant reduction in items redundancy to achieve a more valid and suitable assessment of alexithymia in adolescents. The results (N=195) are based on a cawi survey conducted between September and December 2021 in a high school in the North-West of Italy.

## ORGANIZATION OF COGNITIVE FUNCTIONS IN ALZHEIMER'S CONTINUUM. A NETWORK ANALYSIS AND COMMUNITY DETECTION APPROACH

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Cognitive functioning is a complex pattern of relationships between neuropsychological domains. We applied Exploratory Graph Analysis to neuropsychological evaluations to investigate the cognitive reorganization in three conditions: Subjective Memory Complain (SMC), Mild Cognitive Impairment (MCI), and Alzheimer's Disease (AD). The SMC showed three clusters of cognitive domains: memory, language, and executive functions. The communities are well connected with weak relationships. This pattern is stable with good replicability for each test in its community. The MCI revealed four communities: memory, language, executive functions, and visuospatial abilities. However, the pattern is not stable and the boundaries between clusters three and four are fragile. The network is sparser than the previous one. The AD showed two communities: memory and the other tests. This network is stable and sparser than the others, with quite strong connections. The Network Invariance Test revealed significant differences between AD and the other groups. In a continuum from less (SMC) to more (AD) connected networks, each diagnosis is characterized by specific cognitive reorganizations. From SMC with segregated cognitive domains to AD where only memory is isolated, passing through the unstable MCI pattern

## NEW INSIGHTS INTO THE CONCEPTUALIZATION OF ACADEMIC MOTIVATION: A NETWORK ANALYSIS STUDY

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In motivation (and most of psychology), the standard conceptualization of measurement are latent variable models. Recently, a new perspective has emerged: the psychometric network models add valuable knowledge about the relationship between variables that are not detectable in latent variable models (Christensen et al., 2020). Employing exploratory graph analysis, we examined the network structure of the Academic Motivation Scale (AMS), which measures academic motivation according to Self-Determination Theory (SDT; Ryan & Deci, 2017), in a representative sample of 26,598 Italian adolescents. We estimated a regularized partial correlation network using the graphical LASSO algorithm in the item and dimension level. We tested the stability of both networks and identified the most important variables. The network model supported the posited five motivational dimensions of the AMS: external, introjected, identified, intrinsic and amotivation. Node strength centrality suggested that identified regulation is the most central dimension, whereas amotivation is the less central dimension in the motivation structure as measured by the AMS. The network model therefore supports the theoretical structure of SDT's model and provides insights into the conceptualization of academic motivation.

## MEASURING TRUST IN SCIENCE DURING A PANDEMIC

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Since the early months, the spread of the COVID-19 pandemic has evolved in the hope that the scientific community will find a cure, quickly satisfied with the discovery of vaccines. A number of studies have pointed out that over the past two years, citizens' trust in science has increased everywhere. However, much of the research has detected the change in trust through one single item. Only a minority of studies define trust in science as a construct and employ validated scales. These include the Nadelson 21-items scale (2014), which presupposes trust in science as a one-dimensional construct. The present research is a psychometric evaluation of the Nadelson tool, which contains marked specificities that can create not negligible facets of content. Adding few items, a new version of the scale is proposed with the aim of measuring the facets of the trust in science and, above all, the ambivalence of trust, i.e. the mixture of positive and negative beliefs simultaneously associated with science, scientists and the scientific method. The results are based on two quantitative surveys (cawi, avalanche sampling), conducted between September 2021 and March 2022 (N=200, N=400) and analysed using models of classical test theory (CFI).

# PSYCHOPHYSIOLOGY 1

## NEUROFUNCTIONAL CORRELATES OF INTEROCEPTIVE ATTENTIVENESS: AN EEG SOURCE LOCALIZATION STUDY

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Interoception refers to the ability to sense modifications of internal bodily states. The accurate perception of internal states is crucial for self-regulation, as well as for higher-order cognitive-affective processes. Despite increasing attention on interoceptive attentiveness (IAtt), little is known about its neurofunctional correlates and potential objective biomarkers of IAtt performance. 36 volunteers took part in this study and were asked to undergo a heart-beat counting task (HCT), a widely-used IAtt task. Central electrophysiological (EEG) and cardiovascular activity was monitored during both resting-state and HCT. Intracortical sources of EEG signals were estimated via eLORETA. Contrast analyses comparing HCT and resting highlighted higher current density estimates for Alpha frequency during the task, with primary cortical seed in the right parahippocampal gyrus. Regression analyses exploring the association between IAtt scores and task-related changes in intracortical current density during HCT have highlighted a positive association for the Beta frequency bands, with primary cortical seeds in cingulate gyrus and insula. Findings add to available literature by further specifying the electrophysiological signature of interoceptive attentiveness

## COGNITIVE REAPPRAISAL OF HIGH- AND LOW-CALORIE FOOD CUES IN RESTRAINED EATERS: A PRELIMINARY ERP INVESTIGATION

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Cognitive reappraisal is an emotion regulation strategy that might help to control food intake. Restrained eating is characterized by a cognitive effort to resist the urge to eat, aiming to control body weight. The present study investigated neural correlates of emotional processing and reappraisal of food stimuli in female restrained eaters. Restrained (RES; n=12) and unrestrained eaters (UNRES; n=15) were presented with pictures of high- and low-calorie foods. ERPs were recorded while participants were instructed either to passively look at the pictures (Watch) or to change the appetitive value of food (Increase, Decrease). Results showed that LPP amplitude in 500-700ms time window was larger for RES than UNRES, for high- than low-calorie food, and during both reappraisal conditions than passive viewing. In 700-1000ms time window, RES showed a lower LPP amplitude during Decrease condition for both types of food, as compared to Watch condition, with no differences for UNRES. In contrast with UNRES, RES showed early increased attention towards food that ended in a successful down-regulation of the appetitive value of foods, which in one hand might help to control overeating at the sight of palatable food, on the other hand in RES it could result in a problematic eating behavior.



## RE-CONCEPTUALIZING THE NEUROANATOMICAL LANDSCAPE OF NEUROPSYCHIATRIC DISEASES VIA META-ANALYTIC AND BAYESIAN APPROACH. THE CASE OF AUTISM

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In light of the massive neuroimaging research, coordinate-based meta-analysis (CBMA) has emerged as a potent tool to identify neuroanatomical regions robustly involved in psychiatric disorders. However, despite this success, the application of CBMA (and of neuroimaging, in general) findings into the clinical-diagnostic setting remains an open challenge. This is due to the fact that (i) canonical CBMA method cannot infer which neuroanatomical correlates are selectively altered in clinical conditions under examination; (ii) brain disorders tend to exhibit a common pattern of neuroanatomical variation (<https://doi.org/10.1002/hbm.25105>). Here, strengths and pitfalls of CBMA method will be introduced and how its findings can be used for understand the neuroanatomy associated with psychiatric disorders. Then, the talk will present a novel CBMA data-driven Bayesian approach (<https://doi.org/10.1002/hbm.25452>) to determine the selective neuroanatomical landscape of brain disorders. Lastly, this approach will be illustrated by an exemplary use case dealing with the selectivity of atypical neuroanatomy in autism spectrum disorder (<https://doi.org/10.1016/j.bpsc.2022.01.007>).

## MODULATION OF INDIVIDUAL DIFFERENCES IN SEXUAL MOTIVATION BY MESOLIMBIC DOPAMINE: INSIGHTS FROM MURINE ANIMAL MODELS

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Brain dopamine plays a key role in the motivational aspects of sexual behaviour by acting at the level of the limbic system, in particular the mesolimbic pathway (i.e., VTA – nucleus accumbens). Recent work from our Lab, employing psychogenetically selected (i.e., the Roman lines) as well as knockout rats for the dopamine transporter (DAT KO), indicates that differences in mesolimbic dopamine relate to individual differences in sexual motivation, mainly through the modulation of neuroplastic processes involved in the acquisition of sexual experience. In particular, a weak mesolimbic dopaminergic tone relates to a lower sexual motivation and biobehavioural traits similar to those observed in depression-like conditions, while a more robust one relates with a higher sexual motivation and better performance. However, chronic hyperdopaminergia as that in DAT KO rats is associated with impulsive-compulsive traits, stereotypies and inability to properly direct reward-related behaviour. The characterization of these processes is important for the identification of the mechanisms on the basis of individual differences in sexual motivation and to better understand the pathophysiology behind psychogenic sexual dysfunctions, as well as that behind other alterations in motivated behaviour.

## WHAT ARE THE NEURAL CORRELATES OF COGNITIVE CONTROL? AN ERP-STUDY ON PROACTIVE AND REACTIVE CONTROL IN SPATIAL STROOP RESOLUTION

*Giada Viviani (Dipartimento di Neuroscienze, Università degli Studi di Padova)*

The neural underpinnings of cognitive control -the ability of pursuing specific relevant goals- are still unclear. In this EEG study, we used a spatial version of the Stroop task to investigate the neural correlates of proactive and reactive control during interference resolution. To do this, the proportion of congruency (PC) was varied in a continuous way at both the global (gPC) and item (iPC) levels, while controlling for low-level confounding effects. Event-related potentials (ERPs) were analyzed using linear-mixed effect models. In the post-stimulus analysis, gPC modulated ERP Stroop effects over the prefrontal and parietal scalp regions from 200 ms onward, whereas iPC modulated ERP Stroop effect in more central regions from 400 ms. In the pre-stimulus analysis, gPC significantly modulated prefrontal and parietal ERPs bilaterally. Overall, we found an anticipatory form of control in the pre-stimulus phase and two distinct forms of control in the post-stimulus phase, which both affected interference resolution. Still, ERPs do not guarantee the required precision for investigating proactive and reactive control interaction. Thus, spectral analyses and representational approaches are needed to better clarify the nature of cognitive control.

# **SOCIAL COGNITION 1**

## THE INFLUENCE OF ETHNIC BIAS ON THE ATTRIBUTION OF INTENTION TO ACTIONS

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Ethnic prejudice can bias perception and cognitive processes: from misperceiving objects to influencing high-level cognitive processes (e.g., empathy and medical behaviour). However, the literature lacks investigation about the influence of ethnic bias in attributing intentions to actions (specifically gestures and body postures), which is at the bases of interpreting and predicting others' behaviour. We used implied actions (i.e., upper limb in aggressive postures) performed by white and black models in a pre-attentive, implicit task (the Sidedness task) and analysed results according to the degree of both implicit and explicit measured prejudice (valence and arousal measured with the SAM, prejudice questionnaire and IAT). Black hands are judged as less positive than white hand ones as a function of overt prejudice and show an advantage in RTs for palm over back views that cannot be explained in simple perceptual terms and is compatible with an "alarm" reaction. The effect in RTs with black hands can be interpreted in terms of a defensive or counterattack response action influenced by ethnic prejudice.

## DO FACES AND FACE-LIKE STIMULI CAPTURE ATTENTION? THE ROLE OF DISTRACTOR FEATURES IN MODULATING VISUAL- SEARCH PERFORMANCE

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It is well known that humans pay special attention to faces compared to other objects in the environment, as face processing has been proposed to be automatic and mandatory. The features that trigger face-specific processing mechanisms are not yet identified. To investigate the role of a face configuration in capturing attention in a stimulus-driven way, in two behavioral experiments we used a modified version of the irrelevant face visual search paradigm (IFVSP). In Experiment 1, we used photos of heterogeneous faces that presented hairs and other confounding elements. In Experiment 2 face stimuli were replaced with an easier-to-process set of faces in which confounding elements were removed. Our results showed faster reaction times when an irrelevant simple face was present, suggesting a facilitated distractor-rejection mechanism for visually less complex stimuli. We suggest that the ability of irrelevant faces to capture attention is a task-dependent effect, with featural complexity and task load having an influence on automatic and involuntary face-processing.

## CONSCIOUS PROCESSING OF FACIAL EXPRESSIONS: EVIDENCE FROM BINOCULAR RIVALRY DYNAMICS AND FACIAL MIMICRY MANIPULATION

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This presentation aims to give a theoretical contribution to the intersection between sensorimotor simulation and consciousness. In two experiments we manipulated participants' facial mimicry in a binocular rivalry paradigm to test the role of facial feedback in conscious perception of emotional facial expressions. Our findings confirm a role of facial mimicry in conscious processing of facial expressions. We propose that the integration of information processed in sensorimotor (i.e., mimicry) and visual areas modulates the subjective experience of facial expressions.

## LATERALITY DURING THE OBSERVATION OF HUMAN BODIES: AN EYE-TRACKING STUDY

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Previous studies found that both right- and left-handed people show a perceptual and attentional bias toward the right side of others' body. In particular, when required to indicate the orientation (front or back view) of pictures of ambiguous human silhouettes performing one-handed manual actions, both right- and left-handers perceive the figures more frequently in an orientation congruent with a movement performed with the right rather than the left hand. A bias towards the right side of human bodies could be adaptive in social life by means of an increased efficiency in monitoring both communicative and aggressive acts, most social interactions occurring with right-handed individuals. In the present study, we tested whether the same bias can be observed in an eye-tracking experiment. Specifically, we recorded participants' eye movements during the observation of static human bodies seen from the front or from the back. We hypothesized that the bias toward the right side of human bodies would have emerged as a tendency to direct the gaze toward the right and left side of stimuli in bodies shown from the back and from the front, respectively. The results are discussed in light of previous studies.



## THE SOCIAL SIDE OF ACTION IN PLANTS

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How an action is performed is not solely determined by biomechanical constraints, but it depends on the agent's intention, i.e., why the action is performed. Recent findings in humans suggest that intentions can be specified at a quantifiable level in different motor intentions translate into different kinematic patterns. In the present study we used 3D kinematical analysis to investigate whether the organization of climbing plants' approach-to-grasp action is sensitive to the kind of intention driving their movement towards a support, namely individual or social. For the individual condition a plant in isolation acted upon the support. For the social condition two plants in the same pot acted upon a support in the middle. Results indicate differences in kinematics depending on the context within which the plant is acting paralleling those obtained in humans for similar conditions. In the presence of neighbours, climbing plants are able to modify their behaviours to maximize their long-term gains, including the grasping of a potential support. Overall these data suggest that the organization of climbing plants' kinematics is sensitive to the 'intention' driving their movement towards a potential support.

# THINKING AND REASONING 1

## DIFFERENT INCUBATION TASKS IN INSIGHT PROBLEM SOLVING: EVIDENCE FOR UNCONSCIOUS ANALYTIC THOUGHT

*Laura Caravona (Università degli Studi di Milano-Bicocca), Laura Macchi (Università degli Studi di Milano-Bicocca)*

The aim of the study was to explore the effect of different types of incubation tasks (visual, numerical and verbal) with various levels of attentional focus and cognitive effort (non-demanding, low-demanding and high-demanding) on the resolution of insight problems. The most effective was found to be the low-demanding task (regardless of its nature), which although requiring attentional focus, leaves resources available for the unconscious analytical restructuring process, obtaining a high percentage of success in solving the insight problem shortly after completion of the incubation task. Overall findings support the hypothesis of Unconscious Analytic Thought (Bagassi & Macchi, 2016), according to which the restructuring required in insight problem solving implies a covert thinking process that includes a relevant, analytic and goal-oriented search.

## DOES THE OPPONENT MATTER? TRACKING STRATEGIC SOPHISTICATION ADAPTATIONS IN ONE-SHOT GAMES

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A growing body of research in behavioral economics accounts for deviations from equilibrium when individuals are playing games. Theories of bounded rationality address out-of-equilibrium outcomes to limited cognitive abilities, whereas models of social preferences take into account motives toward others. In this study we were interested in understanding why agents do not behave fully strategically by manipulating the opponent players had to interact with. Eye-tracking was employed to investigate the decision process underlying choice. Gaze data were collected while participants faced a series of 3x3 one-shot games, playing with a computer applying a rational strategy in one phase and with a real human counterpart in another. A cluster analysis based on game choices grouped participants into three types: unsophisticated, sophisticated and cooperative players. Eye movements inspection revealed a more strategic and less cooperative behavior when interacting with the computer in some players only. A considerable number of agents showed similar gaze patterns and comparable levels of cooperation with the two opponents. Therefore, prosocial behavior is not always truly motivated by other-regarding preferences but frequently arises from the inability to correctly represent the game.

## THE FORMATION OF THE REPRESENTATION OF THE PROBLEM: A STUDY ON THE EFFECT OF THE CONTENTS

*Davide Nale (Università degli Studi di Milano-Bicocca), Laura Macchi (Università degli Studi di Milano-Bicocca)*

Our study investigates the role of contents in the formation of the representation of a problem. During the elaboration of the experiments and in the interpretation of the results we followed the guidance of Mosconi and colleagues and, in his general acception, of the psicoretoric approach. A total of 210 participants have been tested using seven alternative versions of a classic logical problem extracted from the Cognitive Reflection Test. Significant differences between the experimental versions have emerged from the statistical analysis; the result has been explained trying to enlighten the participants' thoughts. We verified that the characteristic of familiarity of the content is not enough to grant a correct representation of the problem. Implicit relationships between the data that are extrapolated through beliefs and knowledge about the contents of the problem seem, instead, to be more relevant for a functional representation. Those seem to be meta-informations that define the representation of the problem and the consequent thoughts of the participants.

## ON THE PLEASURES OF THE MIND RELATED TO HUMOUR AND INSIGHT PROBLEM SOLVING

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This presentation examines the cognitive and affective commonalities and differences between humour and insight problems, focusing on the reasons given by the participants to explain their preferences. Four studies were carried out in which participants were asked to choose the two cartoons or the two visuo-spatial insight problems that they liked the most and the two that they liked the least. They were then asked to explain the reasons for their choices. The responses were analyzed based on a set of categories inspired by the Theory of the Pleasures of the Mind (Kubovy, 1999). Many overlaps consistently emerged between cartoons and insight puzzles in the categories relating to Curiosity, Violation of expectation, and Virtuosity, confirming an overall similarity between these two “pleasures of the mind”. They are nevertheless distinct in terms of certain aspects. For instance, the most common reason for liking a cartoon was that it elicited a sense of General happiness and Lack of surprise more often motivated dislike for a cartoon, whereas lack of Joy of verification was the main reason for disliking an insight puzzle – and indeed finding the solution to a problem is associated with a positive evaluation if it.

## CREATIVE PROBLEM SOLVING AS A FUNCTION OF BOTH DIVERGENT THINKING AND EXECUTIVE FUNCTIONING: THE ROLE OF AGING

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The role of executive functioning in creative thinking is still debated. According to the hypothesis of a detrimental role of executive functioning in creative problem-solving, increased inhibitory control would negatively interfere with the production of many alternative responses, thus hindering creative solutions. There is, however, a growing body of research showing that executive functions - such as inhibition, working memory, and attentional switching - facilitate creative thinking. This study aimed to investigate the contribution of executive functioning, together with its age-related decline, and that of divergent thinking to creative problem-solving. As executive functioning decreases with aging, we compared the problem-solving performance - as well as working memory, impulsivity, and divergent thinking - of a group of older adults to a one of younger adults. Results showed that problem-solving is negatively predicted by aging and impulsivity and positively predicted by divergent thinking and verbal working memory. These findings reveal a combined contribution of executive functions and divergent thinking to creative problem-solving, suggesting that both convergent and divergent processes should be considered in interventions to contrast age-related decline.

## AGING 2



## TELEREHABILITATION IN EARLY COGNITIVE IMPAIRMENT: A USABILITY AND USER EXPERIENCE STUDY OF THE HOMECORE SYSTEM

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HomeCoRe is a system for cognitive telerehabilitation. The main goal was to determine its usability and user experience in patients with subjective cognitive impairment (SCI), Mild Neurocognitive Disorder (mNCD), and Major Neurocognitive Disorder (MNCD), and to evaluate the association between patient familiarity with technology and main outcome measures. Eight older adults with SCI, mNCD, and MNCD received a touch-screen laptop implemented with the HomeCoRe system. The intervention consisted of 18 sessions and included a patient-tailored adaptive protocol of cognitive exercises. Usability was assessed in terms of treatment adherence and patient performance across the intervention sessions; user experience via self-reported questionnaires. All patients completed the intervention with post-treatment improvement of cognitive performances. Usability and user experience were overall satisfying with perceived easiness of use, enjoyability and high motivation during the use of HomeCoRe. Familiarity to technology correlated only with the perceived ability to start and/or perform exercises autonomously. These preliminary results suggest that usability and user experience of HomeCoRe are satisfactory and overall independent from patient familiarity with technology.

## SMART AGING PLATFORM FOR EVALUATING COGNITIVE FUNCTIONS IN THE EARLY PHASES OF COGNITIVE DECLINE

*Sara Bottiroli (Università Giustino Fortunato - IRCCS Fondazione Mondino), Sara Bernini (IRCCS Mondino Foundation), Elena Cavallini (Università di Pavia), Tomaso Vecchi (Fondazione Mondino IRCCS, Università di Pavia), Cristina Tassorelli (Fondazione Mondino IRCCS, Università di Pavia)*

Smart Aging is a serious game platform that generates a 3D virtual reality environment in which users perform a set of screening tasks designed to allow evaluation of global cognition. Each task replicates activities of daily living performed in a familiar environment. This study aimed to ascertain whether Smart Aging could differentiate between different types and levels of cognitive impairment in neurodegenerative disease. Ninety-one subjects — healthy older adults, patients with single-domain amnesic mild cognitive impairment (MCI), patients with single-domain executive Parkinson's disease MCI, and patients with mild Alzheimer's disease — were enrolled. They received a cognitive evaluation with the MMSE, the MoCA, and the Smart Aging platform. We analyzed global scores on Smart Aging indices as well as the Smart Aging total score, looking for differences between groups. Results highlighted that Smart Aging was sensitive to detect differences in cognitive performances among patients with different levels of cognitive impairment. In particular, patients among diagnostic groups performed significantly differently in mostly of the tasks. These findings demonstrate the validity of Smart Aging for assessing cognitive functions in the early phases of cognitive decline.

## PERCEIVED SOCIAL SUPPORT MEDIATES THE RELATIONSHIP BETWEEN USE OF GREENSPACE AND GERIATRIC DEPRESSION IN A LARGE SAMPLE OF MATURE ADULTS AND ELDERLY PEOPLE

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The exposure to urban greenspace, such as residential parks, urban gardens, and trees in streets may have benefits on mental health of individuals, as confirmed by several studies. Instead, few studies emphasized the relationship between the use of greenspace and mental health, in particular geriatric depression, as well as the role of perceived social support among elderly people. To this aim, we carried out the present study to investigate the possible link between use of greenspace and geriatric depression symptoms (i.e., depressive thoughts, depressive mood, perceived social isolation, and fear of future) mediated by perceived social support. A structural equation model was tested in a sample of 623 mature adults and elderly people (53-90 years old) residing in the Metropolitan Area of Bari, Apulia. Results showed that the use of greenspace was directly associated with depressive mood and perceived social isolation, and that these associations were partially mediated by perceived social support. Our findings highlighted the effectiveness of the use of greenspace per se but also in conjunction with social support in reducing some depressive symptoms. This evidence may be useful to policymakers to promote accessibility and social inclusion in an age friendly cities framework.

## TABLET-BASED TOOLS FOR THE EARLY DETECTION OF MILD COGNITIVE IMPAIRMENT AND DEMENTIA USED IN PRIMARY CARE: A SYSTEMATIC REVIEW

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Primary care is the ideal setting for the early detection of Mild Cognitive Impairment (MCI) and dementia. However, some limitations (i.e., short time for visits, and lack of specific neuropsychological training) complicate the administration of tools such as MMSE, MoCA, and GPCog. Recently, a lot of tablet-based apps have been proposed to overcome these limitations. Aims: to review tablet-tools used in primary care for the early detection of cognitive decline and to make a qualitative comparison with traditional ones. We conducted a systematic review, according to PRISMA, across MEDLINE and EMBASE. Thirty-six studies reporting on 27 tools were identified. For MoCA, AUC scores are 0.73-0.95 for MCI, and 0.89-0.99 for Dementia. For tablet-tools, AUC scores are 0.71-0.99 for MCI, and 0.79-1.00 for dementia. Sixteen out of 27 tools can be self-administered, and 11 tools require less than 15 minutes with automatic scoring. Feasibility studies are provided only for 7 out of 27 tools. GP could benefit from tablet-tools about low dependence on the examiner, fast administration, and automatic scoring; however, easy requirements of the device, adaptation to different cultures, languages and literacy levels need to be better addressed in future studies.

## COGNITIVE AND PSYCHOLOGICAL FUNCTIONING IN PEOPLE WITH MILD AND MODERATE DEMENTIA: THE ROLE OF SOCIAL AND EMOTIONAL LONELINESS

*Elena Carbone (Dipartimento di Psicologia Generale, Università degli Studi di Padova), Erika Borella (Dipartimento di Psicologia Generale, Università degli Studi di Padova)*

This study assessed the relationship between loneliness, with its social and emotional facets, and the language and behavioral/neuropsychiatric functioning as well as quality of life (QoL) in people with dementia (PwD), considering dementia severity as an individual characteristic. Fifty-eight mildly-impaired and 55 moderately-impaired PwD completed the Social and Emotional Loneliness scale, along with measures of language skills, the frequency and severity of behavioral/neuropsychiatric symptoms (BNS), and QoL. Neither loneliness, nor its facets, contributed to explaining BNS, regardless of the dementia severity. Loneliness, and its social facet, did predict dysphoria symptoms to a small extent in mildly-impaired PwD, and language skills mainly in moderately-impaired ones. Loneliness also explained QoL in both PwD groups, with its social facet predicting QoL in the mildly impaired, and its emotional one in the moderately impaired. These findings suggest that loneliness and its facets clearly impact perceived QoL of PwD, and influence their language skills and dysphoria symptoms, depending on dementia severity. Loneliness needs thus to be examined systematically in PwD, considering its different facets and dementia severity as an individual characteristic.

# CLINICAL PSYCHOLOGY

## ASSOCIATIONS BETWEEN PERSONALITY AND DRIVING BEHAVIOR ARE MEDIATED BY MIND- WANDERING TENDENCY: A CROSS- NATIONAL COMPARISON OF AUSTRALIAN AND ITALIAN DRIVERS

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This study examined the relationships between personality traits (i.e., neuroticism, extraversion, openness, agreeableness, and conscientiousness) and aberrant driving behavior in a sample of Australian and Italian drivers by investigating the mediation effect of Mind Wandering (MW) tendency. Although unsafe driving behaviors are influenced by both a driver's mind wandering tendency and personality traits, the potential interaction between these variables and their association with driving behavior has not been previously investigated. Nine-hundred-four active drivers (n = 452 Australians, n = 452 Italians) completed an on-line survey evaluating self-reported personality traits, driving behaviors, and MW tendency. A multi-group path analysis showed that MW tendency significantly mediated the effects of neuroticism, extraversion, and conscientiousness on aberrant driving behavior with invariances across nationality groups. These results suggest that the association between personality and driving behaviors is partially explained by the driver's tendency to MW while driving. The study suggests the usefulness of the assessment of personality measures in the study of driving distraction and fitness-to-drive evaluation purposes.

## TEO: ASSESSING THE IMPACT OF CONVERSATIONAL AI IN THE TREATMENT OF STRESS AND ANXIETY IN AGING PERSONS

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Today, about 10,000+ mental health (m-health) mobile apps have been developed for different kinds of users, to meet different psychological needs such as depression, stress, anxiety, etc. Despite the large user interest in these m-health apps, most of them do not have any clinical validation, are exposed to privacy violations and their design does not account for the involvement of mental health professionals. We believe that these types of digital interfaces could provide users with augmented professional psychological support and in increasing the effectiveness of interventions. For these reasons, a mobile app was developed with artificial intelligence technologies and was validated in the context of ageing workers seeking help. The objectives of the research were to evaluate the contribution of TEO (Therapy Empowerment Opportunity), the m-health agent based on conversational AI technology. TEO promotes m-health and well-being by reducing work-related stress symptoms and anxiety levels in elderly subjects. The study results showed that participants who received psychological treatment supported by the m-health app were likely to report better satisfaction and more stable trend of improvement limited to the individual perception of stress related symptoms.



## THE INFLUENCE OF BIASED CANCER RISK PERCEPTION ON INTENTION TO UNDERGO GENETIC TESTING IN HIGH-RISK MALE POPULATION

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BRCA1/2 germline mutations increase risk for breast, ovarian, prostate, and pancreatic cancer (BPPC). First-degree relatives (FDRs) of carriers have a 50% chance of passing on or inheriting the mutation. Research focused more on women than men. This study investigated perceived personal risk for BPPC and intention to undergo genetic testing (IUGT) in 115 men (Mage = 41.93; SD= 17.27) who were FDRs of BRCA1/2 carriers and did not undergo genetic counselling. Significant association emerged only between breast cancer (BC) relative risk perception (RP) and IUGT ( $r=.227$ ;  $p<.05$ ). Moreover, younger participants showed higher levels of perceived BC risk ( $r=-.220$ ;  $p<.05$ ). Participants who perceived themselves as less at risk of BPPC than the average male population of equal age showed biased RP and unrealistic optimism. RP appears to be a potential emotion regulation strategy used by individuals exposed to an increased risk. It remains to define if this could influence adherence to cancer prevention programs. Additional research is needed to clarify the link between RP and surveillance compliance, drive recommendations for risk reduction, and improve genetic testing in high-risk males.

## “MIRROR, MIRROR ON THE WALL, WHO IS THE FAIREST OF THEM ALL?” THE DYSMORPHIC TRAITS AND USE OF BEAUTY FILTERS. A POTENTIAL RELATIONSHIP

*Laura Serra (IRCCS Fondazione Santa Lucia), Giada De Nardo (Lumsa Università di Roma)*

The present study aimed to assess relationship between body dysmorphic traits and the use of beauty filters in social media. 333 young individuals were recruited (age ranging from 13 to 30; gender: F=244; M=86; O=3). A devoted questionnaire (Body Modification Questionnaire-BMQ) to assess body perception, self-esteem and the inclination to use beauty filters to modify own photos was developed. The sample underwent the BMQ, the Beck Anxiety (BAI) and Depression Inventories (BDI), the Multidimensional Perfectionism Scale (MPS) and the Body Uneasiness Test (BUT). Parametric and non-parametric correlations and analyses of variance were applied. BMQ showed that 20.1% of individuals usually used beauty filters. BMQ significantly correlated with clinical scales, mainly with the perfectionism scale (MPS); BAI and BDI significantly correlated with MPS and BUT. BAI, BUT and BMQ showed significant gender differences. Females and others individuals performed worse than males individuals in several scales in particular in those assessing the anxiety, the general level of dysmorphophobia, the concerns about weight and body image. This study showed that the tendency to use beauty filters is gender-related and that is associated with an altered body image, perfectionism and dysmorphic traits.

## STRESS AND COPING STRATEGIES IN THE FIRST LOCKDOWN: GROUP DIFFERENCES AND EVIDENCE-BASED STRATEGIES TO REDUCE THE PSYCHOLOGICAL BURDEN

*Simone Varrasi (Università di Catania), Giuseppe Alessio Platania (Università di Catania), Francesco Maria Boccaccio (Università di Catania), Concetta Pirrone (Università di Catania)*

COVID-19 pandemic severely challenged mental health. By mean of an online questionnaire administered during the first lockdown to 550 participants, we aimed at investigating stress and coping strategies related to selected variables (age, gender, health, profession and lockdown-related routine). Stress especially affected ( $p < .05$ ) women, youths, unemployed, people with low schooling and psychiatric patients, whereas health professionals were the least stressed. Higher stress levels ( $p < .05$ ) were observed in subjects who stopped working, left home less than two times a week or experienced an increase of workload. We also observed that avoiding negative thoughts ( $r = 0.42$ ;  $p < .01$ ), seeking social support ( $r = 0.23$ ;  $p < .01$ ) and relying on faith ( $r = 0.1$ ;  $p < .01$ ) correlated with higher stress levels. Only those who maintained a positive attitude showed a minor psychological burden ( $r = -0.16$ ;  $p < .01$ ). Stress was reduced ( $p < .05$ ) in subjects with a positive cohabiting relationship. Having a private garden, practicing sport, living with children and being infected by COVID-19 did not affect stress. Results are discussed and evidence-based clinical interventions are proposed to support and improve functional coping strategies.

## LANGUAGE 2

## IS THERE A RHETORICAL ADVANTAGE OF FIGURATIVE LANGUAGE IN L2?

*Francesca Citron (Lancaster University, UK)*

Figurative expressions such as metaphors, “She’s a fox”, and idioms, “He spilled the beans”, are difficult to master in a second language (L2), even with high proficiency. Neurophysiological research shows similar eye-movement and ERP patterns between proficient L2 and native (L1) speakers: enhanced integration of meaning with context for metaphors than literal expressions, indexed by the N400 component; however, L2 speakers process well-known, conventional figurative expressions more similarly to novel metaphors, e.g., “Cloudy disposition”, and show no automatic retrieval of idioms from memory compared to native speakers, indexed by the P300 component and shorter reading times for idioms. An open question is whether the rhetorical advantage of figurative language affects L2 speakers. Recent neuroimaging findings from our lab confirm stronger engagement (amygdala) in L1 for increasingly more metaphorical sentences, but almost no engagement in L2. These results are discussed in relation to the more widely investigated emotional distance from L2.

## SENTENCE PROCESSING ACROSS LANGUAGES IN L1 AND L2: A COMPUTATIONAL APPROACH

*Andrea Gregor De Varda (Università degli Studi di Milano-Bicocca), Marco Marelli (Università degli Studi di Milano-Bicocca)*

Language is processed not only by integrating words into the phrasal context, but also by actively anticipating the upcoming phrasal material. Experimental support for this view has come, among other sources, from the field of computational modeling. It has been shown that the surprisal (i.e. the negative logarithm of the probability) of an upcoming word as computed by a language model is a solid predictor of reading times (Smith & Levy, 2013). However, most of the studies that support this view are based on English and few other Germanic languages, leaving an open question as to the cross-lingual generalizability of these findings. Furthermore, it is not clear whether prediction plays a role in non-native language processing in bilingual individuals (Grüter, Rohde, & Schafer, 2014). We approach these questions at large scale, extracting log-probabilities from mBERT, a massively multilingual neural language model, and assessing their psychometric predictive power on the MECO corpus, a cross-linguistic dataset of eye-movement records (Siegelman et al., 2022). We show that surprisal is a strong predictor of reading times across languages and fixation measures, and that its effects in L2 reading are modulated by the subjects' proficiency in the non-native language.

## EXPOSURE TO FOREIGNER-DIRECTED SPEECH ENHANCES L2 WORD LEARNING

*Giorgio Piazza (Basque Center on Cognition, Brain and Language, Spain), Marina Kalashnikova (Basque Center on Cognition, Brain and Language, Spain), Clara D. Martin (Basque Center on Cognition, Brain and Language, Spain)*

Foreigner-Directed Speech (FDS), the speech register that native speakers use to address L2 listeners of their language, is assumed to support L2 learning. But it is unknown whether FDS facilitates L2 word learning as compared to Native-Directed speech (NDS). To address this issue, 30 Spanish participants were asked to learn 24 novel English words in an online experiment. Participants were divided in two groups of learners: one being exposed to FDS and one to NDS. Participants were first presented with novel objects and their auditory labels (e.g., “This is a deest”) produced either in FDS or NDS. Next, the same sentences were presented together with 4 objects displayed on the screen. Participants had to click on the object corresponding to the label they heard. We calculated participants’ accuracy and response time in both groups of participants (FDS, NDS). If FDS supports L2 learning, we expected the FDS group to learn the novel words better and faster than the NDS group. Growth curve analysis showed that the FDS group learnt the novel words better and responded faster than the NDS group. These findings support the didactic assumption of FDS, which should be considered in L2 teaching models.

## LANGUAGE PRODUCTION PERFORMANCE IN UNIMODAL AND BIMODAL BILINGUALS AND STRUCTURAL PROPERTIES OF THE FRONTAL ASLANT TRACT

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Bilingual people can either use two spoken languages (unimodal bilinguals) or a spoken and a signed language (bimodal bilinguals), which differ in how the input and output are perceived and articulated. The present study is aimed at investigating how the use of spoken and signed languages are related to structural properties of the frontal aslant tract (FAT), which connects portions of the superior frontal gyrus with the inferior frontal gyrus, regions found to be crucial for language production. We extracted tractographic measures from a group of unimodal bilinguals (L1 Italian, L2 English) and a group of bimodal bilinguals (L1 Italian, L2 Italian Sign Language), and correlated such measures with the performance in language productions tasks in L1 and in L2. The results showed that the hindrance modulated orientational anisotropy (HMOA) of the left FAT correlated with picture naming latency in L2 for both groups of bilinguals. In addition, the HMOA of the right FAT correlated with naming latency in L1 only for bimodal bilinguals. Overall, the results suggest that the left FAT is primarily involved in the control of spoken language when using L2, while the right FAT is involved in the control of signed language when using a spoken language.



## WHEN “ELEFANTE” HELPS SAY “ELEPHANT” BUT “CAVALLO” DOES NOT HELP SAY “HORSE”: EXAMINING THE ROLE OF CONTEXTUAL INFORMATION IN REGULATING INFLUENCES FROM THE NONTARGET LANGUAGE

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Psycholinguistic theories suggest that, when speaking, bilinguals select representations in the target (i.e., intended) language either by focusing attention onto that language or by inhibiting the nontarget (i.e., unintended) language(s). Cognitive control research suggests a more nuanced view according to which the selection of task-relevant vs. task-irrelevant information is contextually determined, with some contexts favoring influences from task-irrelevant information in the selection process and other contexts limiting such influences. Here, we examined whether the selection of target vs. nontarget languages is also contextually determined. Native Italian speakers used L2 English, their nondominant language, to name pictures that have English-Italian cognate (i.e., phonologically similar) names (e.g., elephant-elefante) vs. noncognate (i.e., phonologically dissimilar) names (e.g., horse-cavallo) presented in mostly-cognate vs. mostly-noncognate contexts. The relative magnitude of the cognate effect (noncognate – cognate) in the two contexts was interpreted as reflecting the extent to which the nontarget language was permitted to influence the selection process in each context, with the hypothesis being for a larger influence in the mostly-cognate context.

# MEMORY

## SWITCHING BETWEEN BODY AND ENVIRONMENT: THE SELECTIVE EFFECT OF SPATIAL MISALIGNMENT

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Spatial information is represented in memory according to egocentric (body-centered) or allocentric (object-centered) reference frames. In interacting with the environment, we need to switch between frames (e.g., wayfinding, object location memory). It has been shown that the structure of an environment (i.e., environmental axes) can influence how spatial information is represented. The effect of environmental axes on the transition between reference frames is still unexplored. In the current study, participants had to memorize triads of objects in two virtual rooms, where the walls were parallel (aligned condition), or rotated by 45° (misaligned condition), compared to the learning perspective. Afterwards, they were asked to provide switching (from ego-to-allo; from allo-to-ego), and non-switching (only ego; only allo), spatial judgments about memorized stimuli. Results showed that the misaligned more than the aligned condition had a detrimental effect specifically when participants had to translate from allocentric based spatial representations (from allo-to-ego and from allo-to-allo). This suggest that the presence of a misaligned environmental layout magnify the cost needed to switch between spatial representations, especially when the first anchor point is not body-centered.

## CONSCIOUS AND UNCONSCIOUS INFORMATION PROCESSING IN VISUAL WORKING MEMORY. AN EEG STUDY

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While traditional models of Working Memory (WM) did not consider the storing of unconscious information, recent studies demonstrated above-chance accuracy on WM tasks with unconscious visual stimuli. Despite meta-analytical support of behavioral results, methodological problems undermine drawing strong conclusions. We conceptually replicated previous behavioral results with methodological improvements. Then we recorded the Contralateral Delay Activity (CDA) which is a WM-specific event-related potential activity to track the amount of stored information. We used a combined change-detection and delayed-estimation task with a Gabor patch as the target. The stimulus contrast was participant-wise calibrated using an adaptive staircase procedure to find the detection threshold. Using (generalized) linear mixed-models and signal-detection methods we analyzed the WM accuracy, precision, and CDA activity. Crucially we separated detected and undetected trials including also catch trials. We found at-chance behavioral accuracy for undetected stimuli and no evidence for information storing in the CDA activity. Visible stimuli are associated with increasing accuracy and CDA activity suggesting an interesting and novel role of the CDA in tracking the visual conscious experience.

## THE ROLE OF PSYCHOPATHY IN THE EFFECTS OF LYING ON MEMORY

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Studies have demonstrated that lying about an event can influence the liar's recall of such an event. In particular, research has shown that lying -by adopting the fabrication strategy- can make the liar prone to memory distortions even when the liar honestly recalls such experience. However, a few studies have investigated whether these mnemonic effects can depend on individual differences, such as personality traits. The aim of the current study was to verify whether the effects on memory due to fabrication can depend on psychopathy traits. Therefore, 232 participants filled the Personality Psychopathy Inventory and watched a video of a mock crime. Subsequently, participants imagined to have to provide their testimony as the main suspects of the crime. In this phase, some participants told the truth and others lied about the crime. After one week, all participants honestly recalled the crime and replied to some questions about it. Our findings replicated the typical effect on memory by fabricating. Moreover, results showed that psychopathy traits influence the recollection of an event, but they are only involved in the effects of fabrication on memory. Findings are discussed in light of the practical and relevant information they will provide for the legal arena.

## “HOW DO I GET THERE?” THE ROLE OF FAMILIARITY, PERFORMANCE MODALITY AND VISUOSPATIAL FACTORS IN THE ABILITY TO FIND THE SHORTEST ROUTE

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Finding the shortest path to a destination is relevant, not only in unfamiliar, but also in familiar environments, an ability little explored yet. With two studies, we examined this ability in relation to visuospatial factors, the degrees of familiarity with an environment (Study 1) and the modality to perform it, i.e. asking to walk or describe the path (Study 2). In Study 1, undergraduates more or less familiar with their campus performed shortest path finding, pointing and landmark-locating tasks. In Study 2, undergraduates familiar with their campus found the shortest paths by walking to a destination and describing it in writing. In both studies visuospatial tasks and questionnaires were administered. The results showed that the degree of familiarity is related to the shortest path finding accuracy, but not to pointing and landmark-locating tasks performance (Study 1). Participants performed better when walking than when describing the path (Study 2). In both studies, the relationship between shortest path finding performance and self-reported sense of direction emerged. These results broaden our understanding of how familiarity, performance modality and visuospatial factors support the ability to find the shortest path.

## FALSE MEMORY AND COVID-19: HOW PEOPLE FALL FOR EMOTIONAL-RELATED FAKE NEWS ABOUT COVID-19

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During the COVID-19 pandemic, people are exposed to an increasing amount of misleading information and fake news. Yet exposure to misinformation and fake news can result in false memories. In two experiments, we examined whether people can form false memories for emotional-related fake news about COVID-19. In Experiment 1, we exposed participants to two COVID-19 fake news along with (emotional) pictures. About 41% of participants reported having heard/seen at least one COVID-19 news that has never occurred. This result was further replicated also in Experiment 2, wherein we did not use any photographs. Moreover, in Experiment 2, participants with conspiracy belief were significantly more likely to report fake news, irrespective of whether these were of conspiratorial nature or not. Finally, findings from both experiments additionally showed that individual differences (e.g., being a COVID-19 high risk person, analytical thinking) can affect the likelihood of creating false memory. Overall, our data demonstrated that false memories can occur following exposure to fake news about COVID-19, and that interventions are needed to better prepare people to discriminate between true and false news.

## METHODS 2



## MEASURING STATE AND TRAIT ANXIETY: AN APPLICATION OF MULTIDIMENSIONAL ITEM RESPONSE THEORY

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To date, the State–Trait Inventory for Cognitive and Somatic Anxiety (STICSA) has now supplanted the use of the State Trait Anxiety Inventory to the measurement of state and trait anxiety. In addition, it provides a specific assessment of cognitive and somatic anxiety. Previous research supported its multidimensional factor structure, gender and age invariance, as well as good convergent and internal discriminant validity, in large samples. However, all the studies on the STICSA have been conducted within the Classical Testing Theory framework. Our goal was to verify the dimensionality of the STICSA within the framework of the Item Response Theory. Participants were 3239 Italian subjects (58% females; 61.5% undergraduate students) ranging from 18 to 99 years. The application of multidimensional Item Response Theory (mIRT) confirmed the dimensions of the STICSA scales. Both the Trait and State scales were composed of two correlated domains: somatic and cognitive. STICSA complex structured items were discretely informative and supported the use of simple compensatory structured items. Results supported that the STICSA is a reliable and precise tool for measuring somatic and cognitive symptoms of anxiety, that occur as a stable emotional trait or under situational threat.

## MEASURING EMPATHY: A META-ANALYTIC FACTOR ANALYSIS WITH STRUCTURAL EQUATION MODELS (MASEM) OF THE INTERPERSONAL REACTIVITY INDEX (IRI)

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Empathy is an important social construct that has been defined in many ways by different authors, resulting in development of several questionnaires. The Interpersonal Reactivity Index (IRI) is one of the most used self-report scales to measure empathy in children, adolescents and adults. However, studies have reported contradictory results about its factor structure. Therefore, the aim of the current study is to assess the dimensionality of the IRI through a Meta-Analytic Structural Equation Modeling approach (MASEM). Eleven studies (total n=9470) were included in the MASEM. The meta-analytic confirmatory factor analyses (CFAs) provided support for four of the tested models. A comparison of these models showed that the four-factor model proposed by Lucas-Molina, et al. (2017) had the best fit. Overall, this MASEM suggests that the IRI provides a multidimensional, rather than a bi-dimensional, measurement of the empathy construct.

## THE FOUR FACTORS OF MIND WANDERING QUESTIONNAIRE: CONTENT, CONSTRUCT, AND CLINICAL VALIDITY

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Despite great interest in Mind Wandering, a fully validated questionnaire has been lacking. The Four Factors of Mind Wandering (4FMW) Questionnaire, presented here, meets this demand. First, 80 items were judged for content validity by two panels of experts. Those items that survived this content validity assessment were then tested using exploratory and confirmatory factor analyses on two independent samples of young adults. The 16 resulting items were shown to cluster into four factors (i.e., Failure in social interaction, Failure in interaction with objects, Unawareness, and Inattention). The 4FMW questionnaire showed good reliability, robust structure, and acceptable goodness-of-fit indices, as well as good convergent validity with another Mind Wandering questionnaire. Importantly, the 4FMW questionnaire was able to discriminate between attention-deficit/hyperactivity disorder and obsessive-compulsive disorder symptoms. The 4FMW Questionnaire is a reliable and valid instrument for assessing mind wandering in the young adult population.

## PSYCHOMETRIC PROPERTIES OF THE EMBODIMENT SCALE FOR THE RUBBER HAND ILLUSION AND ITS RELATION WITH INDIVIDUAL DIFFERENCES

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The Rubber Hand Illusion (RHI) allows for investigating the sense of body ownership in healthy people. RHI is typically measured with a set of questions, but these questionnaires have not been validated, and the individual differences that contribute to the RHI received little attention. We studied 298 participants with the RHI aiming (a) to explore the psychometric structure of the phenomena and build a psychometrically efficient scale; (b) to explore whether and how individual differences (empathy, self-esteem and mindfulness) are associated with the RHI. We found a relatively simple structure consisting of three components: embodiment of the rubber hand, disembodiment of the biological hand, physical sensations experienced during the procedure. The scale is psychometrically reliable and theoretically meaningful. Additionally, network analysis revealed that the embodiment is directly related to empathy and self-esteem, suggesting that embodiment phenomena integrate with the complexity of the individuals and their differences. On the contrary, disembodiment and physical sensation have no direct relationships with personality traits. The study provides substantial evidence to use the embodiment scale as a standard questionnaire for future RHI studies.

## ON THE IDENTIFICATION OF THE OPTIMAL CUT-OFF VALUE IN SCREENING TESTS

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Screening tests often classify individuals based on an optimal cut-off value, which is usually identified via receiver operating characteristic (ROC) curve analysis. The cut-off is typically defined on the sum scores. In this study, the cut-off is defined on item response theory measures of the latent trait, called  $\theta$  scores. Unlike raw scores,  $\theta$  scores take into account how much information the endorsed items provide about the latent trait under consideration. In particular, the sum score being the same, the  $\theta$  scores are higher for those individuals endorsing items that denote behaviors which discriminate well between individuals with different trait levels. An example on real data from a well-known test for measuring depression is presented. ROC curve analysis was used to define two cut-offs, one based on sum scores and the other based on  $\theta$  scores. The latter cut-off outperformed the former in identifying individuals diagnosed with depression as depressed but fell behind it in identifying individuals without such a diagnosis as non-depressed. In screening tests, the cutoff defined on the  $\theta$  scores must be preferred to that defined on the sum scores because it could increase the true positive rate.

# PERCEPTION 1

## THE EFFECT OF ELECTRIC FIELD DISTRIBUTION ON GLOBAL MOTION PERCEPTION USING DIFFERENT TES TECHNIQUES

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Previous evidence has shown that high frequency transcranial random noise stimulation (hf-tRNS) decreases motion coherence threshold when a cephalic montage (i.e., reference over Cz) is used (Ghin et al., 2018). Here we tested the effect of different stimulation protocols in which the reference electrode is placed on the ipsilateral arm (extra-cephalic montage) to test the effect of electric field distribution on visual motion discrimination performance. Specifically, we assessed the effects of electrode localization using hf-tRNS, anodal or cathodal tDCS, and Sham stimulation over hMT+. Motion direction discrimination performance was assessed using random dot kinematograms (RDKs). Given the increased distance between the two electrodes in this montage, we expected smaller improvement in motion discrimination performance. The results suggest that increased interelectrode distance mitigates the efficacy of hf-tRNS. Furthermore, we did not find any significant modulation with the other tES techniques. In other words, the relative position of the two electrodes might have affected the current flow characteristics, resulting in a decrease in neuromodulation. These results highlight the importance of stimulation protocols and how varying the distance alters performance.

## INVESTIGATING ROLE AND TIMING OF FOVEAL RETINOTOPIC CORTEX IN PERIPHERAL DISCRIMINATION: A PSYCHOPHYSICAL STUDY

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In 2008 Williams et al. studying position-invariant object representations in higher-level cortex, unexpectedly discovered a novel form of feedback that leads to behaviourally relevant activation in the fovea during peripheral object discrimination. In a series of experiments, Fan et al. (2016) showed a deterioration of performance during peripheral object discrimination induced by a foveal foil presented with a flexible delay of around 150-300ms. By replicating the paradigm with more SOAs, we aimed at better characterizing the temporal dynamics of foveal feedback. Using the Signal Detection Theory, we showed that the foil effect is earlier than previously found (around 100-150ms) and with no obvious secondary peaks. Moreover, for the first time we show the presence of a dip for criterion which is temporally distinct from that of sensitivity. Finally, for the sensitivity dip, the timing and amplitude do not change significantly when comparing low- and high-level visual stimuli. Overall, our results extend previous findings by showing that the foveal noise effect is robust to both low-level and high-level visual processing and that it also affects criterion. We suggest that foveal noise acts on two mechanisms, one more perceptual and earlier and one more cognitive and delayed.



## BAYESIAN INFERENCE IN PERCEPTUAL DECISION MAKING: A NOVEL RANDOM DOT MOTION PARADIGM

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Previous research on perceptual decision making emphasized the role of sensory information in guiding behavior, by employing experimental paradigms in which only the likelihood precision of sensory evidence (e.g., the stimulus coherence in random dot motion task, RDM) is manipulated. More or less implicitly, this way of investigation relies on a view of the brain as a mere passive filter of sensory information. However, increasing evidence supports the idea of perception as a form of (approximate) Bayesian inference: the brain predicts incoming signals and probabilistically encodes information by integrating “likelihoods” of newly gained sensory information with “prior” beliefs. Here, we present a novel RDM in which the probability of observing a rightward motion changes during the task. This novel paradigm allows us to investigate how precision in the likelihood and in prior beliefs interact to guide behavior. Preliminary behavioral data are consistent with a computational account of perceptual decision making based upon Bayesian inference. The next goal will be the evaluation of previous decision models and the implementation of a new model allowing to test these hypotheses.

## A BRIEF PERIOD OF POSTNATAL VISUAL DEPRIVATION LEADS TO SELECTIVE ALTERATION IN THE RESPONSE TO FACIAL IDENTITY IN SPECIFIC REGIONS OF THE HUMAN FACE NETWORK

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How innate programs interact with visual experience to develop a specialized face network in the brain remains largely unknown. Here we investigated the impact of a transient period of total visual deprivation on the functional tuning of face selective network. We studied 11 individuals treated for dense bilateral congenital cataracts before 7 months of age (CP) and 12 sighted controls (SC) during a face-identity adaptation fMRI experiment. In contrast with the idea that experience must be necessary for the formation or maintenance of face domains, we observed preserved face categorization as well as larger responses to different than same faces and at both frequencies in the CP group, similarly to what we observed in the SC group. However, a significant reduction of release from adaptation was observed in CP compared to SC in the mid-portion of the FFA bilaterally. CP also showed a trend for face-identity adaptation in the ventral portion of the right body area when presented, which was not observed in SC. This suggest that lack of vision early in life does not prevent categorical face tuning in the fusiform cortex; nevertheless, it can impact on typical face-identity function at higher stimulation rate, as well as on functional differentiation of face/body-sensitive regions.

# ATTENTION

## TRANSFER OF LEARNING-GUIDED CONTROL ADAPTATIONS: A STUDY WITH CONGRUENCY CUES

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Transfer of cognitive abilities has often been described in regard to Working Memory, while little has been said about Cognitive Control. Recent studies have proposed that congruency cues can be used to investigate learning-guided cognitive control adaptations in a trial-by-trial fashion during conflict tasks. In this study, we employed congruency cues within an inducer/diagnostic paradigm during three different experiments in order to (1) induce a control learning between cue and string congruency in a Flanker task variant and (2) test whether this learning could transfer to (a) the same Flanker variant, (b) a different Flanker variant and (c) a different conflict task. Results provided evidence that congruency cues are strategically used by participants to adapt their cognitive control and that these learned strategic control strategies can be transferred to some extent to a very similar task variant (near transfer). Moreover, an explorative questionnaire showed that participants were aware of which cue helped them the most, suggesting that learning may have occurred consciously.

## AGE-RELATED DIFFERENCES IN THE IMPLICIT LEARNING OF TARGET SELECTION AND DISTRACTOR SUPPRESSION

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In recent years the employ of implicit mechanisms based on Statistical Learning (SL) emerged as a strong factor in biasing spatial attention, so that target selection is improved at frequently attended locations and distractor filtering is facilitated at frequently ignored locations. While those mechanisms have been clearly shown in younger adults, similar evidence in normal ageing is scarce and controversial. We studied the learning and persistence of SL of target selection and distractor suppression in both younger and older adults in visual search tasks where the frequency of target (Exp.1) or distractor (Exp.2) was biased across spatial locations. Results showed that SL of target selection was preserved in the older adults so, like their younger counterparts, they showed a strong and lingering advantage in target selection at locations more frequently attended. Differently, they were not as able in using SL of distractor suppression, so distractor interference was maintained throughout the experiment independently of the bias associated. Our data showed asymmetries in making use of statistical regularities of target and distractor probabilities between older and younger adults, suggesting different and age-related subsystems of implicit experience-driven spatial attention.

## VISUAL LECTURE FEATURES AND STUDENT ENGAGEMENT IN ASYNCHRONOUS REMOTE LEARNING: THE DAD TIME PROJECT

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The pandemic required a sudden switch to remote education. Teachers faced the challenge of engaging students through a substantially new medium. The DAD Time Project aims to understand which video lecture's visual, auditory, and structural features facilitate students' sustained attention. To this end, we collected data on asynchronous lectures held by the University of Milano-Bicocca during the academic years 2020/2021 and 21/2022. We will discuss the relationship between the visual components of video lectures (i.e., signal quality, content type, visual cluttering) and users' mode of engagement that will emerge from the analyses currently underway. The data refers to 27 video lessons belonging to 17 courses and attended by 1709 students (57 - 301 students per lesson,  $M = 157.41$ ,  $sd = 64.05$ ). For each lecture, we identified the most and least frequently viewed sections, distinguishing between the students' first day of access and the two weeks preceding the course's final exam. We are now investigating the visual features of these sections. In addition, we used cluster analysis to identify different profiles of students' content consumption, and we are examining whether these profiles are associated with the lectures' overall visual characteristics.

## FOLLOWING OTHERS' TRACES: UNPREDICTIVE FOOTPRINT CUES ELICIT COVERT ORIENTING OF ATTENTION

*Mario Dalmaso (Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Università degli Studi di Padova)*

Bodily signals provided by others, such as their eye-gaze direction or pointing gestures, can elicit covert attentional shifts in an observer (i.e., social attention). Here, three experiments show that covert attentional shifts can also be evoked by footprint stimuli, which are an indirect index of body orientation and navigation within physical space. Social (i.e., bare feet; Experiment 1), nonsocial (i.e., shoes; Experiment 2), and animal (i.e., dog; Experiment 3) footprints were used as unpredictable, task-irrelevant central cues in a spatial cueing task requiring a speeded discrimination of a lateralized target. Overall, reliable covert attentional shifts emerged in all experiments, and of the same magnitude regardless of cue type. Taken together, these results indicate that our social attention system can be shaped by a variety of footprints belonging to both human and nonhuman domains.

## INTO THE WILD OR INTO THE LIBRARY? UNDERPINNINGS OF PERCEIVED RESTORATIVENESS IN A VARIETY OF NATURAL AND BUILT ENVIRONMENTS

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Research showed that exposure to natural settings can improve cognitive performance, decrease negative affect, and promote stress recovery. However, several theoretical and methodological issues are still open. In our study (N = 176) we focused on: 1) the characterization of 24 different types of natural and built environments in relation to perceived restorativeness features; 2) the relationships between the psychological features underlying perceived restorativeness (conventional ART dimensions, but also opportunity for reflection and perceived safety). Cluster analysis distinguished 5 clusters of environments with clearly different profiles: benign natural, wilder natural, agreeable urban, functional urban, and harsh urban. While benign natural environments showed the highest degree of overall perceived restorativeness, agreeable urban environments were perceived as much more restorative than wilder natural ones, thus unveiling a more articulated pattern than the natural/built distinction. Path analysis showed that the opportunity for reflection plays a central role in perceived restorativeness, beyond basic ART features, and also perceived safety contributes to it, thus highlighting the need for a more comprehensive assessment of what makes an environment restorative.



# LANGUAGE 3

## THE ROLE OF LITERARY METAPHORS IN POETRY APPRECIATION

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Research on neurocognitive poetics has shown that parallelisms, such as rhyme and meter, slow down reading and enhance literary appreciation. We extended this research to a very common and creatively used semantic device, metaphor. By using different types of literary expressions, from literal ones to dead, conventional novel and extremely novel metaphors, we test the hypothesis that a moderate level of stimulus innovation will lead to highest appreciation, whereas very familiar or extremely novel stimuli will lead to low appreciation (Optimal Innovation; Giora, 2004). In two studies, we investigated the role of literary metaphors in evoking aesthetic appreciation of modern poems and single sentences extracted from poems. We found that the presence of literary metaphors enhances appreciation in response to poems. Furthermore, increasingly more novel and creative metaphors lead to increasing appreciation, showing a linear relationship. This is at odds with Optimal Innovation and suggests that even highly novel and complex metaphors are appreciated in poems, despite being more difficult to read and make sense of. Finally, aesthetic appreciation seems to be only partially driven by increasing cognitive load; metaphoricity plays a more important and substantial role.

## IS IT EASIER TO PROMPT A DIALOGUE WITH ABSTRACT COMPARED TO CONCRETE WORDS?

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The interactive nature of abstract concepts (ACs), like freedom, is manifested not only in the modality through which they are acquired but also in their use. Indeed, due to the heterogeneity of their exemplars, we might feel i) less confident about their meaning, ii) more challenged by the multiplicity of evoked contexts, iii) more open to negotiating their meaning. While studies focused on identifying the semantic dimensions of ACs, evidence on their pragmatic dimensions is lacking. Here, we collected ratings for concrete and abstract concepts on relevant pragmatic/semantic dimensions, i.e., Openness to Negotiation, Word Confidence, Social Metacognition (perceived need of others), Contextual Availability, Pleasantness, Valence, Familiarity, Easiness of starting a Conversation. Participants evaluated it was easier to start a conversation with ACs. Participants rated ACs higher on Social Metacognition, Openness to Negotiation, and lower on Word Confidence and Contextual Availability. Notably, ACs with higher ratings on easiness of conversation belonged to emotional and self-sociality sub-clusters. The results offer new insights into the pragmatic aspects linked to abstract concepts' use.

## THE SEMANTIC SPACE OF “GREEN” CONCEPTS

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Nowadays, the effects of global warming and climate change generate many concerns about ecosystems' and humans' health. In order to promote efficient “green” policies, it is crucial to understand how people mentally represent the ecological emergency, examining what concepts like “smog”, “plastic” or “pollution” mean to them. Unfortunately, the conceptualization of the “green” domain is still an under-investigated topic. Our contribution aims to fill this gap by exploring how these concepts are organized in semantic space. We collected ratings for both ecological and non-ecological (i.e., natural, geographical, geopolitical, technological) concepts from lay Italian participants on various semantic dimensions. The most salient differences emerged by contrasting eco and non-eco concepts. Ecological concepts were rated as abstract as the technological ones but at the same time as less familiar. Participants were less confident in their meaning and reported that they needed others more to understand them, even if they did not wholly trust field experts. Also, they rated eco concepts as more emotionally loaded than technological ones and more likely to generate public debates, even if they evoked fewer social situations. The results offer insights into current theories of concepts.

## THE SELF-DISCLOSING VOICE OF YOUNG WOMEN: WHAT ROLE FOR THE LISTENER'S GENDER?

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The study examined self-disclosure experiences in a sample of 31 Italian girls aged 15-17 years ( $M = 15.90$ ;  $SD = 0.78$ ). The main objectives were: 1. to identify vocal markers of self-disclosure in female adolescents 2. to investigate how the listener's gender affects the speech. Each subject took part in two sessions with two peer friends as collaborators (one male and one female). In each session, the young women were asked to read aloud the formal consent (used as baseline). Then, the collaborator confided something intimate to her friend and asked her to do the same. At the end, each subject uttered the sentence: "I have told you about very confidential events, please be discreet" (the experimental utterance). The baseline and the experimental utterances were acoustically analyzed. Results show that the self-disclosing voice is featured by slow articulation rate with pauses, low pitch, high variability of loudness with low minimal peaks and hoarse and breathy speech. With a male listener, the self-disclosing process is characterized by shorter interactions and the voice by lower pitch variability, whereas when the listener is a female it is characterized by higher irregularity and hoarseness. The two profiles are discussed from a linguistic-acoustic perspective.

## THE POWER OF LANGUAGE AS A SOCIAL CUE

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Recent studies have shown that language is a cue for social categorization. However, these studies contrasted speakers of languages that belong to two different sociolinguistic contexts. Here we explore whether language categorization is a mandatory phenomenon that occurs even when the languages associated with speakers cannot be attributed to different sociolinguistic communities. Two experiments (N = 50 each) were performed using the Memory Confusion Paradigm and testing bilingual participants from two bilingual communities: Spanish-Basque (Basque Country, Spain) and Italian-Venetian (Veneto, Italy). Participants saw 8 speaker's faces together with the auditory presentation of the sentences: four faces were associated with one language (Spanish / Italian) and four with the other language (Basque / Venetian). After a distracting task, the sentences were presented again with all faces. Participants must recognize the face associated with each sentence. In both experiments, participants were more likely to confuse faces within the language category than between categories, an index that faces were categorized by language. Our findings indicate that language automatically functions as a cue for social categorization, just like other well studied cues as race, gender or age.

# NEUROPSYCHOLOGY 1

## DOES CULTURE INFLUENCE COGNITIVE PERFORMANCE? AN EMPIRICAL STUDY WITH ITALIAN SPEAKERS FROM DIFFERENT CULTURAL BACKGROUNDS

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Clinical neuropsychology is facing considerable challenges due to the vast migratory flows our society is undergoing. The aim of this work is to study the influence of cultural origins on cognitive performance in Italian tests. Three groups of participants speaking fluent Italian were recruited based on cultural origin and current place of residence: participants with Italian cultural origins living in Italy (ITA-ITA) and living abroad (ITA-ABR), and participants with foreign cultural origins living in Italy (FOR-ITA). With a questionnaire developed ad hoc for the study (i.e., Interculturality vs. Italian Culture questionnaire) two different indexes were assessed: interculturality (INT) and closeness to Italian culture (CIC). Cognitive performance was measured through an Italian cognitive screening: tele-Global Examination of Mental State. Results highlight that belonging to one of the three groups was a significant predictor of cognitive performance: FOR-ITA always obtained the lowest scores if compared with the other two. Moreover, CIC and INT are respectively positive and negative predictors of cognitive performance. These results underline the importance of considering culture of origin when assessing cognitive performance in individuals with non culture-free cognitive tests.



## REMOTE NEUROPSYCHOLOGY ASSESSMENT: 15 REY'S WORDS, WORD-PAIR LEARNING AND DIGIT SPAN BACKWARD AND FORWARD. NEW NORMATIVE DATA ON THE ITALIAN POPULATION

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As a result of the lockdown experienced due to COVID-19, the difficulty of moving from one place to another for some people, and the spread of new technologies, tele-neuropsychology has become a necessary modality to be provided alongside in-person neuropsychological services. Our study aims to provide new normative data on neuropsychological tests of memory to perform in videoconference (i.e., Rey 15-Item Test, Digit Span Forward and Backward, Word Pair Learning). The participants, 199 healthy volunteers (62% women), aged between 20 and 80 years (Mean = 43.28 years, SD = 18.03) and a range of education between 5 and 18 years (Mean = 15.17, SD = 3.75), performed the verbal memory tests by means of the Google Meet platform. Multiple regression analyses were conducted to test the effect of socio-demographic variables on test scores. In addition, non-parametric tolerance intervals were used to determine normative cut-off values. In conclusion, our study offers precise administration methods and reference values for the remote setting, and it shows a good overlap with the data obtained in the in-person setting.

## CAFFEINE MAKES ACTIVITIES MORE FUN AND BOOSTS SEMANTIC ASSOCIATION AND TEXT READING ABILITIES

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Previous studies show that caffeine improves text comprehension and global perception of stimuli, abilities typically associated with the right brain hemisphere. Experience of positive emotions appears specifically linked to improvement in fluency and global perception. We supposed that caffeine could improve reading and semantic abilities in connection with an improvement of positive emotion. A sample of 54 healthy young adults took part in a crossover double-blind, randomized placebo controlled trial. We administered 200mg of caffeine or placebo to the participants and invited them to play a board game. After 25 minutes, we asked them to evaluate the game and their activation state; then, we administered text reading and semantic association tasks. Our study shows an improvement in reading speed and in the ability to find semantic associations between words following the administration of a single dose of caffeine. What is even more interesting is that participants report that the same game activities performed during the two experimental sessions are more fun only after caffeine intake. These effects are not related to sleep deprivation or other types of self-perceived psychophysiological activation.

## PSYCHOPHYSIOLOGY 2

## NEUROASSESSMENT IN SPORTS: TOWARDS A THREEFOLD MODEL ON PHYSICAL-PSYCHOLOGICAL-NEUROCOGNITIVE FITNESS

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Profiling of athletes' psycho-physical traits is a crucial step in planning, implementing, and monitoring their training schedule. Performance data may provide relevant and reliable information to evaluate athletes' progress over time and/or rank them against their peers, and to help to profile their strengths/weaknesses, to adapt protocols to their needs, and to identify talent. Yet, the topics of assessment and, specifically, of its implementation in practice are still quite controversial. Indeed, despite the role of neural-cognitive load in modulating performance outcomes, assessment procedures to evaluate athletes' current performance and their potential often move those factors to the background while focusing primarily on physical determinants of performance and basic physiological measures. Here we introduce a multifaceted model for the definition of performance in sports by pairing the more established constructs of physical fitness and psychological fitness with the construct of neurocognitive fitness. Such a model might foster a perspective change from traditional assessment to neuroassessment, which we identify with the integration of self-report, observational, and physiological measures to sketch the profile of athletes' neurocognitive efficiency

## SMOKING CUE REACTIVITY IN VR AND PC MONITOR BASED. A PHYSIOLOGICAL AND BEHAVIORAL STUDY

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Recently, Virtual Reality is used in addiction fields to improve the reliability and efficacy of cue-reactivity paradigm against craving. Despite this, clear evidence of VR effectiveness in cue reactivity in contrast to the PC Monitor-based paradigm is missing. The aim of the current study was to compare smoking cue-reactivity task in Virtual Reality vs PC monitor Based in a double experimental session, by means of self-report and Skin Conductance Level. The sample size included 25 smokers and 23 nonsmokers, at least 2 hours in smoking withdrawal. The VR and PC Monitor scenarios are based on 360 DoF video (4.10 min each) and they were validated using an independent sample. Repeated measure ANOVA revealed a significant effect of Smoker in craving score (with a significant difference in each timepoint between smoker and non-smoker). A significant effect of Smoker and Device was present considering SCL (higher arousal in smoker vs nonsmoker and in VR vs PC device based). Self-reports considering Sense of Presence and Realism of experience indicated VR as a more immersive device than PC monitor. The study suggests more efficacy of VR to induce craving (both physiological and self-report) compared to the classical PC monitor paradigm.

## COLD-HEARTED CHOICES: A STUDY ON THE INFLUENCE OF CARDIAC PHASE ON VOLUNTARY DECISIONS TO MAKE ACTIONS

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Physiological states (e.g., cardiac phase) influences cognitive processes. For instance, a facilitatory effect of systole compared with diastole has been found in tasks requiring instructed response inhibition. However, it is not clear whether the inhibition caused by systole plays a crucial role also when one has to decide whether to make or withhold a response. Here we used a modified version of the Go/No-Go task to test whether systolic inhibition impacts on the decision to act (“choose condition”) in healthy individuals. Results showed that participants’ responses were less frequent at systole compared to diastole in the “choose” condition. We then used an established physiological stressor, the Cold Pressor Test (CPT), to manipulate cardiac activity and induce anxiety. Results showed that such manipulation affected the inhibition caused by systole on the decision to act. Specifically, we observed that the systole/diastole difference in the number of “choose” trials in which participants initiate a response decreased as their perceived state anxiety increased. Overall, our results provide converging and causal evidence of an effect of physiological states and perceived anxiety on the decision to act.

## QUIET HEART AND QUIET EYE IN TARGET SPORTS: CARDIAC AND OCULAR CORRELATES OF PREPARATION FOR ACTION

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A pronounced cardiac deceleration and a longer quiet eye (QE) duration (the final fixation on the visual target) have been associated with optimal preparation for action in target sports. Based on the cardiac-somatic hypothesis, we questioned whether cardiac deceleration and the QE phenomena are linked to each other. Eye-tracking and electrocardiogram were co-recorded from 16 participants as they performed 60 golf putts. Cardiac deceleration was operationalized as heart rate change (Delta HR) from baseline (-6 to -4 s) to action (0 to +1 s, 0 s = movement initiation), deceleration duration (peak-to-trough interval), and deceleration magnitude (peak-to-trough amplitude). The QE was divided into three components: before movement initiation (QEpre), after movement initiation (QEpost), and the sum of these two (QEtotal). Median radial error was used as the index of performance. QE duration did not correlate with performance or cardiac deceleration. However, Delta HR and deceleration duration correlated significantly with performance (respectively:  $r_{s(14)} = .538$  and  $-.636$ ). Furthermore, partial correlations indicated that these effects were independent from the QE duration. The results suggest that how long cardiac deceleration persists might be more informative than its magnitude.

## STRESS AND DECISION-MAKING IN ISOLATED, CONFINED, AND EXTREME ENVIRONMENTS: POLAR SETTLEMENTS AS SPACE ANALOGUES

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Psychological research in extreme environments has been significantly growing over the last two decades. This increasing interest is mostly due to the renewed plans for manned space missions to Moon, Mars, and beyond. For this purpose, several studies have been conducted in analogue environments, that is, environments that share one or more features with long-term space missions. Such features may represent physical (e.g., altered light exposure, low oxygen levels, microgravity) or psychosocial (e.g., confinement, lack of privacy) threats for individuals and crews. Coping with these stressors is paramount to safe and successful missions. Nevertheless, the results obtained are far from conclusive, especially for cognitive research. We studied the effects of confinement, altered photoperiod, and hypoxia upon human decision-making processes and physiological stress markers in polar environments. The behavioral results suggest that these factors may differently affect decision-making based on intuitive and rational strategies. A systematic investigation of decision-making and cognitive performance in extreme environments would allow moving toward constructing a broad theoretical framework, useful for future mission planning, development of countermeasures, and training of astronauts.



## **SOCIAL COGNITION 2**

## INTENTIONALITY IS THE KEY: THE ROLE OF VOLUNTARINESS OF ACTIONS FOR VICARIOUS SENSE OF AGENCY IN HUMAN-ROBOT INTERACTION

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The Intentional Binding (IB) paradigm is a well-established measure of implicit Sense of Agency (SoA). Previous evidence showed that individual SoA, in the form of the IB effect, is weakened when the action is not intentional. Our study investigated whether the same occurs in a shared social context with the humanoid robot iCub, using the IB paradigm as a measure of “vicarious” SoA towards robot’s actions. Adult participants performed an IB task both alone and with iCub, reporting the time of occurrence of self- and robot-generated actions. Participants’ and iCub’s actions could be either voluntary, i.e., pressing a button, or involuntary, i.e., externally triggered by a mechanical lever. Data collection is currently underway. We hypothesized that participants would experience individual SoA only when their actions were voluntary. Moreover, we expect that the same would occur with iCub’s actions, showing that people experience vicarious SoA towards robots only when their actions are perceived as voluntary. It would suggest that intentionality plays a crucial role in vicarious SoA in Human-Robot Interaction (HRI). By the time of the conference, the data collection and analyses will be concluded and we will present whether the results turn out to be in line with the hypothesis.

## HOME ADVANTAGE AND REFEREE BIAS BEHIND CLOSED DOORS: AN ANALYSIS IN UEFA TOP RANKED DOMESTIC LEAGUES

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The home advantage and the referee bias regularly occur in professional sports, particularly in association football (Gómez-Ruano et al., 2022). Spectators' support has always been considered one of the most relevant factors determining these two phenomena; yet, normally it was difficult to isolate its contribution (Ponzo & Scoppa, 2018). The possibility to systematically study the effects of spectators' support – or, better, of its absence – in an ecological context was given by the numerous matches played behind closed doors due to the COVID-19 pandemic. Considering both outcome and performance variables for the home advantage, and several variables for the referee bias, we investigated whether the two phenomena still occurred in matches without spectators. Data from the last part of the 2019/20 season (841 matches, first and second divisions of the top four countries in the UEFA ranking) revealed a significant reduction of home advantage with respect to the three previous seasons, and the absence of referee bias (Sors et al., 2021). Data from the entire 2020/21 season (3,898 matches) are consistent with such results (Sors et al., under review), highlighting that spectators significantly contribute to determine the dynamics and outcomes of professional football matches.

## INTOLERANCE TO UNCERTAINTY AND PERSONALITY FACTORS TOWARDS COVID-19 PANDEMIC: A STUDY ON THE PSYCHOLOGICAL CONDITION DURING FIRST LOCKDOWN

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The first lockdown that occurred during the COVID-19 pandemic was a moment of great uncertainty, given its epochal uniqueness. With the aim to investigate the ability to tolerate uncertainty during the lockdown, an online questionnaire was administered to a sample of 550 subjects, taking into consideration variables such as age, gender, personality factors, occupation, and habits. Results showed that the less uncertainty was tolerated, the more anxious and negative emotions one felt. In particular women ( $p < .05$ ), younger people ( $p < .05$ ), students ( $p < .05$ ), those who suffered the interruption of job activity ( $p < .05$ ), those who cohabitated with several people ( $p < .05$ ) and unemployed ( $p < .05$ ) less tolerated the uncertainty of the period; on the contrary, health professions ( $p < .05$ ), and parents of children aged less than 10 ( $p < .05$ ) managed uncertainty more effectively. Statistically significant relationships with personality factors were observed: those who were more intolerant to uncertainty had higher levels of neuroticism ( $r = 0.21$ ;  $p < .01$ ), friendliness ( $r = 0.15$ ;  $p < .01$ ) and conscientiousness ( $r = 0.14$ ;  $p < .01$ ). Results confirm the need for targeted psychological interventions, particularly on those who prioritize social interactions.

## VIRTUAL SOCIAL TOUCH ON EMBODIED AVATARS IN PATIENTS WITH FIBROMYALGIA

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Fibromyalgia (FM) is a chronic pain syndrome, affecting quality of life and social functioning. Since social touch is crucial for personal relationships, we investigated how 'vicarious' social touch is perceived in FM using Virtual Reality (VR) and physiological recordings. Participants (FM and healthy controls) observed a female avatar in first-person perspective. 24 virtual pleasant touches were delivered by another female avatar on 6 different body parts, previously categorized as neutral, social and intimate. Perceived appropriateness, pleasantness, erogeneity and ownership for the touched body part were collected (0-100 Visual Analogue Scales) after each stimulus. Skin Conductance Response and Heart Rate were recorded during each trial. Virtual touch on the intimate area was perceived as less appropriate, less pleasant but more erogenous as compared to the social and neutral one in both groups. FM reported higher perceived appropriateness, pleasantness and erogeneity. No differences emerged in ownership ratings. Although the qualitative evaluation of touch and ownership didn't vary between the groups, FM ratings were higher, suggesting a generalized increased response to touch, while the hypothesis of anhedonia to gentle touch, at least for virtual stimuli, was not confirmed.

## THINKING AND REASONING 2

## FRAMING SELF-SACRIFICE IN THE MORAL DILEMMA OF AUTONOMOUS VEHICLES

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In the investigation of moral judgments towards Autonomous Vehicles (AV), the paradigm of sacrificial dilemma has represented a flexible and widely used experimental tool. Its reliability has been tested in several applications (e.g., virtual reality), but the textual version is still the most employed. In this context, the sacrifice of the AV's passenger typically lies on the 'proactive' utilitarian option, which differs from traditional sacrificial dilemmas where the life of the moral agent is usually jeopardized in the non-utilitarian counterpart. The present study wants to deepen the role of sacrificial framing in moral scenarios, comparing moral acceptability and moral emotions in autonomous and traditional human driving dilemmas. As expected, a higher endorsement of utilitarian behavior was observed when it allows for self-protection. Interestingly, the utilitarian option was considered less immoral in the case of concurrent self-sacrifice. Finally, framing sacrifice allowed to observe a discrepancy in the activation of self/other referred moral emotions if decision-maker's life is at stake. This study collects significant information on the moral perception of autonomous transportation, bringing new evidence on an important methodological aspect of the sacrificial dilemma.

## “IF ONLY I HADN’T OVERTHOUGHT AT BEDTIME”: COUNTERFACTUAL THOUGHTS AND COUNTERFACTUAL EMOTIONS RELATED TO INSOMNIA

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Counterfactual thinking involves mentally representing how the world would be now if things had been different in the past. Counterfactual thinking and counterfactual emotions (regret, shame, and guilt) contribute to sleep disturbances. Previous works have not yet investigated the content of counterfactuals produced at bedtime nor the frequency and impact of past and future thoughts on insomnia. Participants completed a self-report questionnaire about insomnia severity, bedtime thoughts, regret, emotions, and an open-ended hypothetical sentence about their insomnia. The hypothetical sentence was presented or as counterfactual sentence (i.e., “I would have fallen asleep/ fallen back asleep sooner if only...”) or as causal sentence (i.e., “I had a hard time falling asleep / fallen back asleep because...”). Results showed that: About 1/3 of participants attributed their falling asleep problems to bedtime thoughts (e.g., I would have fallen asleep sooner if only I hadn’t thought about my problems); counterfactual thoughts focus more on external antecedent causes of insomnia in comparison with causal thoughts; participants with more severe levels of insomnia reported a greater frequency of bedtime thoughts; thoughts about future are rated as the most frequent bedtime thoughts.



## ARE FAMILY-DRIVES EFFECTIVE TO SUPPORT MEN'S DECISION-MAKING TO ADHERE TO BRCA1/2 GENETIC TESTING GUIDELINES?

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BRCA1/2 male carriers are at risk of BRCA-related cancers. Research on their motivational drives to be tested is particularly missing. It has been suggested that men lack motivation to be tested for BRCA1/2 genes would come from health campaigns focused on family motivational drives. The present study compared a self-referred framed message (SFM) to a family-referred framed message (FRM) on men's intention to undergo genetic testing (IUGT) for BRCA1/2 genes. Participants were 115 men ( $M_{age} = 41.93$ ;  $SD = 17.27$ ) with a relative with a BRCA1/2 mutation, randomized in two groups. Results showed no differences between the two groups on their subjective health, cancer risk perception, risk-taking tendency and intolerance of uncertainty, presence of children, and general message evaluation. Analysis revealed no differences between SFM and FRM groups on the IUGT. Older participants and those with higher perceived benefit showed higher IUGT. The evidence suggests that motivational drives for men-at-risk could be more complex than what literature has supposed. Further studies are needed to test other forms of health campaigns based on other motivational factors (e.g., regulatory foci).

## SOCIO-COGNITIVE POLARIZATION HINDERS PROBLEM-SOLVING, FAKE NEWS DISCERNMENT, AND COVID-19 VACCINE ACCEPTANCE

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In recent years, the COVID-19 pandemic and a general increased social-media consumption promoted a shift toward rigidity and absolutistic tendencies. The literature on social and cognitive factors underlying political conservatism, intolerance for ambiguity, and xenophobic reactions suggests that these individual characteristics share a common theoretical ground. Based on this assumption, we defined as Socio-Cognitive Polarization (SCP) a factor capturing absolutism, xenophobia, and conservative political ideology. To study how SCP predicted behavioral responses to cope with a global crisis, such as the COVID-19 pandemic, three studies were conducted. Results from Study 1 revealed that SCP was the strongest predictor of believing in fake news during the early peak of the pandemic. Through a latent profile analysis approach, Study 2 identified four groups of individuals who differed in problem-solving performance. Among these, those low in SCP, believing in bullshit (i.e., overestimating pseudo-profound statements) and overclaiming (i.e., tending to self-enhance) performed the best on problem-solving. Finally, in Study 3, SCP was found to negatively predict COVID-19 vaccine acceptance, together with conspiracy beliefs and a lower perception of COVID-19 severity.

## TO WHAT EXTENT DOES COUNTERFACTUAL THINKING PREPARE US FOR THE FUTURE?

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According to the dominant view, counterfactuals are mainly generated to prepare for the future. The present study investigates two predictions critical to the preparatory function of counterfactuals: 1) after negative performances, controllable counterfactuals (i.e., those focused on elements under the agent's control) should outnumber uncontrollable ones; 2) producing counterfactuals should improve performance. Participants (N=1,167) played a target-shooting video game, then produced a counterfactual addressing how their performance could have been better. In Experiments 1 and 2, we manipulated the game difficulty and the presence/absence of negative feedback, which led to overall experiences of greater or lesser negativity. In Experiment 3, we manipulated whether or not participants produced a counterfactual after a first game and then measured their performance in a second one. We found that controllable counterfactuals were less frequent than uncontrollable ones after negative performances. We also observed that counterfactuals, although occasionally favoring the implementation of useful strategies, did not consistently improve performance. These results suggest the need to reappraise the dominant view of the function of counterfactuals.

# EMOTION 1

## EMOTIONAL CONTEXT INTERACTS WITH COGNITIVE CONTROL IN A SPATIAL STROOP TASK

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Emotional interference occurs when the automatic processing of emotional stimuli challenges task-relevant information processing. We hypothesized that emotional interference might affect control processes implicated in conflict resolution. This hypothesis was tested by administering to 75 participants a spatial Stroop task manipulating the degree of required proactive and reactive control by varying the probability of observing a congruent trial list-wise (LWPC) and at each specific target location (ISPC), respectively. The emotional context was manipulated by administering emotional primes (i.e., neutral/sad faces) before each trial. Statistical analyses (i.e., linear mixed model) on response times showed that the interfering effect was enhanced when the proactive control required was lower (i.e., higher LWPC). Intriguingly, the interfering effect of negative emotion was enhanced when lower proactive control was required, regardless of congruency. We concluded that Stroop performance was modulated by the degree of required proactive control and the emotional context. Such results indicate that processing negative emotional information subtracts cognitive control resources, especially when the probabilistic context suggests that limited resources are needed to solve the conflict.

## DEGENERATE PATHWAY FOR PROCESSING SMILE AND OTHER EMOTIONAL EXPRESSIONS IN CONGENITAL FACIAL PALSY: AN HDEEG INVESTIGATION

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Influential theoretical models argue that an internal simulation mechanism (motor or sensorimotor simulation) supports the recognition of facial expressions. However, despite numerous converging sources of evidence, recent studies testing patients with congenital facial palsy (i.e., Moebius Syndrome) seem to refute these theoretical models. However, these results do not consider the principles of neuroplasticity and degeneracy that could support the involvement of an alternative neural processing pathway in these patients. In the present study, we tested healthy participants and participants with Moebius Syndrome in a highly sensitive facial expression discrimination task and concomitant high-density electroencephalographic recording. The results, both at the scalp and source levels, indicate the activation of two different pathways of facial expression processing in healthy participants and participants with Moebius Syndrome, compatible, respectively, with a dorsal pathway that includes premotor areas and a ventral pathway. Therefore, these results support the reactivation of sensorimotor representations of facial expressions (i.e., simulation) in healthy subjects, in the place of an alternative processing pathway in subjects with congenital facial palsy.

## THE ROLE OF THE POSTERIOR CEREBELLUM IN THE PROCESSING OF DYNAMIC FACIAL EMOTIONS

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The cerebellum has long been relegated by neuroscience to the position of a simple motor coordination structure. However, very recent studies have bolstered its important role in high-level cognitive and social functions. In particular, neuroimaging and neuromodulation evidence has begun to show that the posterior cerebellum is involved in social cognition and emotion processing, presumably through its capacity to understand the timing and predict the outcomes of physical and social action sequences. In this study, we used high frequency transcranial Random Noise Stimulation (hf-tRNS) targeting the vermal sector of the posterior cerebellum to affect the performance of 24 healthy participants during an emotion discrimination task of dynamic facial expressions (i.e., transitioning from a static neutral image to a happy/sad emotion). The choice of this particular type of stimuli has enabled the possibility to unveil certain aspects of the role that the posterior cerebellum plays in predictive social perception. The findings are discussed in light of the chronometry of cerebellar contribution to socio-emotional processes and can be considered as one more piece to unravel the mystery of the social cerebellum.

## IMPLICIT AND EXPLICIT FACIAL EMOTIONS: THE ROLE OF SPATIAL FILTERING IN AGING

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Emotion processing is an automatic ability, based on the simultaneous activity of two cerebral routes: the subcortical route is responsible for a faster but unconscious processing, mainly based on the low spatial frequencies (LSF) of the image; the cortical one is responsible for a slower but conscious processing, based on high SF (HSF). A bias for LSF has been shown in aging, together with a positivity bias (an attentional preference toward positive stimuli). To verify whether these biases interact to each other and differ across the lifespan, younger and older participants were asked to press a button as soon as a happy or angry face was detected and to inhibit the response when the face was neutral. Stimuli were presented i) unfiltered and ii) filtered at HSF (conscious processing), and also iii) filtered at LSF and iv) "hybrid" (emotional content at LFS superimposed to the neutral expression at HSF; unconscious processing). We expected a facilitation in the LSF and hybrid conditions in the older group, mainly for happiness, due to the preferential activity of the subcortical route and the positivity bias. An opposite pattern was expected in the youngsters, due to the preferential activity of the cortical route. Results confirmed an effect of aging on facial emotion processing.



## FACES, THE BRAIN AND THE PANDEMIC: AN ERP STUDY OF IMPAIRED RECOGNITION OF FACES WEARING SURGICAL MASKS

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The COVID-19 pandemic has affected our social habits, for instance face-to-face interactions have drastically changed, leading us to frequently interact with “masked” people. If on the one hand the advantage in the persistent use of masks is to reduce viral transmission, on the other hand it has also had the cost of affecting the perception and recognition of social information from faces, in particular emotions. Given the importance of faces in social interactions, we wondered whether the perception of emotional faces wearing surgical masks could be associated to changes in brain activity. We carried out an EEG experiment, extracting Event-Related Potentials (ERPs) evoked by emotional faces with and without surgical masks. We found that, in addition to an impairment in the recognition of emotions, an alteration of face-related ERPs components also occurs during the processing of emotions expressed by faces wearing a surgical mask. Furthermore, participants less frequently exposed to masks in everyday life showed a different response than those with a higher mask exposition, suggesting that the effect we found also depends on this personal habit, thus providing further support to the idea that our brain must adapt to a lack of information in decoding social inputs.

# LANGUAGE 4

## SPATIAL REPRESENTATIONS WITHOUT SPATIAL COMPUTATIONS

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Cognitive maps are assumed to be fundamentally spatial and grounded on perceptual processes only, as supported by the discovery of functionally dedicated cell types in the human brain, which tile the environment in a map-like fashion. Challenging this view, we demonstrate that spatial representations – such as large-scale geographical maps – can be as well retrieved with high confidence from natural language through cognitively plausible AI models based on non-spatial associative learning mechanisms. More critically, we show that linguistic information accounts for the specific distortions observed in tasks when humans have to judge the geographical positions of cities, even when these positions are estimated on real maps. These findings indicate that language experience can encode and reproduce cognitive maps without the need of a dedicated spatial representation system, thus suggesting that the formation of these maps is the result of a strict interplay between spatial and non-spatial learning principles.

## FUNCTIONAL ROLE OF NON-DOMINANT MORPHOLOGY: INTERRUPTION OF RIGHT IPS INFLUENCES LANGUAGE AND MEMORY PERFORMANCE

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The sulco-gyral pattern is a qualitative feature which is mainly determined in utero and stable all over the lifespan, unlike quantitative morphometric features (e.g., cortical thickness). Recent studies found a relation between interindividual variability of sulcal patterns and behavioral performance. Given the general involvement of the intraparietal sulcus (IPS) in different cognitive functions, we investigated the relationship between its morphological pattern and performance at several cognitive tasks in a cohort of 390 subjects from the Human Connectome Project dataset (age range 26-30). A principal component analyses identified five factors explaining most of the behavioral variability observed across several behavioral tasks. A strong association was detected between the factor capturing memory and language performance and the morphology of the right IPS, (interrupted IPS predicts a better performance). We suggest the presence of a “neural reserve” in the right hemisphere, which is limited in the left dominant hemisphere due to macrostructural features (e.g., structural connectivity). Finally, those results could lead to the possibility that sulci morphology is a neural fingerprint that might play a neuroprotective role and mediate functional recovery after brain damage.

## EFFECTS OF NON-INVASIVE BRAIN STIMULATION OVER SEMANTIC CONTROL PROCESSES: A META-ANALYSIS

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The efficient use of knowledge requires control processes to retrieve information in a task-appropriate way. Neuroimaging studies showed that while the anterior temporal lobe (ATL) is involved in the storage of information, both inferior frontal gyrus (IFG) and middle temporal gyrus (MTG) exert top-down control over the activation of information within semantic storage. Previous studies showed that control processes are selectively impaired in patients with semantic aphasia, who have difficulties in manipulate weakly activated information or handle competing information within the semantic store. Transcranial magnetic stimulation (TMS) is used to induce a “virtual lesion” in neurologically intact participants to simulate this deficit. The aim of this meta-analysis is to evaluate the effect of the TMS-generated virtual lesion over the ATL, IFG, and MTG on the ability to use control processes. Frequentist and Bayesian analyses on the effect sizes of interest showed that TMS effects are significant, but there is no evidence for a difference in the effect across brain regions. Several analyses also showed that a publication bias exists, but the effect sizes of the effects of interest remain significant after controlling for it.

## THE INTERACTION OF LINGUISTIC AND SENSORIMOTOR FACTORS DURING HANDWRITING AND TYPING IN ADOLESCENTS

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The automatization of handwriting and typing requires consolidating specific peripheral-motor programs and integrating them with central-linguistic processes. The present work aimed at understanding how linguistic processes interact with peripheral processes underlying handwriting and typing. Participants were 9th-grade Italian students with extensive practice in handwriting but less experience in typing. We analyzed how stimulus length, lexicality, and orthographic complexity affected chronometric measures collected during dictation tasks. Reaction time measures (RTs) were assumed to index linguistic processing before written production starts, while interletter interval mean (ILIs) and whole response duration (WRD) were assumed to index linguistic processing during motor execution. We further assessed participants' lexical and sublexical reading skills and bimanual visual-motor integration skills. Results suggest adult-like interactions of linguistic variables during handwriting, while in typing we found stronger effects of these variables than previously documented in adults. Moreover, reading and visual-motor skills contributed differently to handwriting and typing, unveiling a specific role of individual skills in the automatization of the two written production modalities.

## WORD AND OBJECT RECOGNITION PROCESSES MODULATE MOTOR RESPONSE EXECUTION IN BINARY DECISION MAKING

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Prominent models of decision making envisage motor response execution as a non-decision process that follows the termination of deliberative stages. We investigated this assumption in lexical and object decision paradigms. Via the electromyographic signal associated with the manual responses (i.e., button press), reaction times were fractioned into a premotor component – the interval from stimulus onset until the onset of muscular activity – and into a motor one – the interval between the onset of muscular activity and the response –, which served as a measure of motor response duration. In lexical decision, reaction times were slower for pseudowords compared to words, and the slowdown affected both premotor and motor times. Similar results were detected in the object decision task. Differently, the word frequency effect was only found in the premotor component of the response latencies. The dissociation in the propagation of decisional effects on motor responses is discussed with respect to models of evidence-accumulation and performance monitoring.

## NEUROPSYCHOLOGY 2



## GROUNDING ADAPTIVE COGNITIVE CONTROL IN THE INTRINSIC, FUNCTIONAL BRAIN ORGANIZATION: AN HD-EEG RESTING STATE INVESTIGATION

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Recent results evidenced brain capability to implicitly adjust proactive motor control using low-level associative learning mechanisms, i.e., the probabilistic context of an event occurrence. This process involves three dissociable cortical networks related to three functional mechanisms: expectancy implementation, violation and response implementation. Here, we investigated if the implicit adaptation of motor control can be predicted by the brain intrinsic functional connectivity (FC). We recorded resting-state and task related EEG activity in healthy volunteers before/during performing the Dynamic Temporal Prediction (DTP) task. The DTP is a simple reaction time task where stimulus occurrence is manipulated using different probability distributions, unbeknownst to the participants. We applied a machine-learning approach to predict from resting-state FC, behavioral (response speed and accuracy adaptation) and neural task-dependent outcome. The results show that brain intrinsic FC organization can be potentially used as a predictor of the system capability to adjust motor control in a flexible and implicit way. Our findings support the theoretical framework in which cognitive control is conceived as an emergent property rooted in bottom-up associative learning processes.

## THE ROLE OF COGNITIVE RESERVE ON ALEXITHYMIA IN SUBJECTS WITH SPINAL CORD INJURY BEFORE AND DURING COVID-19 PANDEMIC

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This study aims at investigating the interplay between MA and cognitive resources by implementing a dual-task paradigm. About 200 4th and 5th graders were tested. We used standardized measures to evaluate math abilities (timed and no-timed tasks), fluid intelligence, and aspects related to MA. Two computerized tasks were developed, one testing arithmetic competencies alone (stand-alone task), the other requiring to recall a set of words after completing arithmetic problems (combined task).

## STUDY OF COGNITIVE FUNCTIONS IN AWAKE SURGERY PATIENTS

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Awake Surgery is a novel neurosurgical technique allowing for safer tumor removal and faster recovery of impaired cognitive functions. This operating mode is essential to preserve the anatomical area and its functionality as much as possible. As language represents one of the most lateralized cognitive domains. 12 subjects, affected by a brain neof ormation, were administered standardized neuropsychological tests during the pre/intra/post-operative phases. 5 of them were evaluated 6 months apart for follow-up phase. The surgical modality adopted was the awake-awake-awake type, meaning that the patient is constantly awake throughout the surgical procedure. The cognitive functions spared by the brain lesions were preserved, whereas the impaired domains successfully recovered. Comparing pre-post assessment, 10 of 12 patients maintain a normal cognitive functioning. 6 months later, 5 patients who previously showed neurological deficits in working memory, attention, and executive functions improved their performances; only 2 of these 5 patients had persistent neurological deficits. The results indicate that Awake Surgery is a surgical approach that promotes the identification and preservation of brain areas and their cognitive functioning.

## USING MULTITASKING TO DETECT CONTRALESIONAL SPATIAL DEFICITS SIX YEARS AFTER STROKE

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Common consequences of stroke are hemispatial neglect and extinction, i.e. contralesional spatial processing deficits. Neuropsychological assessments based on classic paper-and-pencil tests, usually show a rapid recovery after insult. However, subtle symptoms might persist in everyday situations, when attentional load increases because multiple sources of information must be processed simultaneously. In this contribution, we capitalized on a well-established multitasking-based approach. We present the case of a patient, who suffered a right hemisphere stroke six years prior to testing. Errorless performance emerged with a paper-and-pencil battery. Additionally, performance was accurate in a computerized condition that required only to detect small targets appearing for 100ms on the left, right or both sides of space. However, when a secondary concurrent task required processing of visual/auditory stimuli, a significant number of omissions emerged selectively for contralesional targets (i.e., neglect and extinction). The patient was also tested in personal space with the same approach. In conclusion, multitasking-based tools have high sensitivity even several years after stroke and unveil pathological spatial asymmetries which go undetected by standard paper-and-pencil tests.

# NEUROSTIMULATION 1

## INVESTIGATING THE ROLE OF THE DORSAL FRONTO-PARIETAL ATTENTION NETWORK IN THE CENTER-SURROUND PROFILE OF THE ATTENTIONAL FOCUS: A TRANSCRANIAL MAGNETIC STIMULATION (TMS) STUDY

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Neurophysiological findings demonstrate that the focus of attention in visual search has a spatial profile consisting of a central enhancement surrounded by a narrow zone of attenuation, which is thought to arise from top-down frontoparietal recurrent activity. However, the respective roles of different nodes within the network and their hemispheric specialization are still unclear. Here, we used TMS to evaluate the role of two regions of the dorsal attention network (DAN) in the surround suppression of the attentional focus: the frontal eye field (FEF) and the intraparietal sulcus (IPS). Participants performed a psychophysical task that mapped the entire spatial profile of the attentional focus, while triple-pulse 10 Hz TMS was delivered either to IPS or FEF on the right (Exp 1) and left (Exp 2) hemisphere. Results showed that stimulation of rFEF and rIPS significantly changed the center-surround profile, by widening the inhibitory ring around the attentional focus. Crucially, stimulation of the lFEF significantly decreased participants' performance regardless of the spatial position of the stimuli. Our results pointed to a pivotal role of the right DAN in orchestrating inhibitory spatial mechanisms that are needed to limit interference by confusable surrounding representations.

## EFFECTS OF ONLINE AND OFFLINE PROTOCOLS OF TRANSCRANIAL STATIC MAGNETIC STIMULATION (TSMS) ON VERBAL FLUENCY TASK

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Transcranial static magnetic field stimulation (tSMS) is a recent technique involving the placement of neodymium magnets on the scalp to modulate brain cortex excitability without inducing an electric field. Its inhibitory effect has been proven in the primary motor and visual cortices; however, its effects on cortical areas supporting higher cognitive functions are controversial. Our study investigates whether tSMS modulates verbal fluency tasks (semantic and phonemic) performed after or during a 30-minute stimulation over Broca's area. 36 students participated in three experimental sessions: real tSMS; sham tSMS; real tSMS on right posterior parietal cortex (rPPC) as control area. Half of the participants performed the fluency tasks after- and the other half during- the stimulation. Statistical analyses were carried out using a mixed-model regression. The main effect of the fluency type emerged across sessions, with more words produced in the semantic fluency tasks than in the phonemic. Our preliminary data on half the sample did not show a significant effect on behavioral performance of tSMS applied during the task, but a performance reduction emerged after stimulating rPPC.

## NEURAL CORRELATES OF THE DOMINANT-HAND MOTOR-SPATIAL BIAS INVESTIGATED WITH THE TMS

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Multiple spatial reference frames guarantee a constant perception of the external world. A study on right and left-handed neurologically healthy individuals have shown a dominant-hand motor-spatial bias (i.e., an error in line bisection in the absence of visual control), coherent with a spatial frame centered on the dominant-hand. Moreover, a study on brain-damaged patients suggested the involvement of cerebellum. The aim of this study was to assess the causal role of the contralateral cerebellum in the dominant hand's spatial-motor bias through the use of Transcranial Magnetic Stimulation (TMS). Three groups of young adults (two of right-handers and one of left-handers) performed a line bisection task with and without visual control (one group with their right hand, two with their left hand, respectively) before and after sham or real offline rTMS stimulation of the cerebellum contralateral to the hand used. Only the stimulation of the contralesional cerebellum reduces the motor-spatial bias of the dominant hand in the absence of visual control for both right- and left-handers. The results confirm that the contralateral (not the ipsilateral) cerebellum plays a role in motor spatial coordinates centered on the dominant hand.



## CONTEXTUAL INFORMATION AFFECTS MOVEMENT KINEMATICS DURING THE PREDICTION OF OBSERVED ACTIONS: A TMS STUDY

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During social interactions, when observing the actions performed by others we can anticipate their intentions on the basis of kinematics and contextual information. In the present study we leveraged single pulse transcranial magnetic stimulation (spTMS) to explore the effects of the interaction of these types of information on motor resonance. 29 participants were recruited to perform an action occlusion task in which they were asked to predict the intention (eat vs. move) associated to reach-grasp movements (whole-hand vs. precision grips) towards objects. Crucially, actions were embedded in congruent and incongruent contexts and occluded at early and late occlusion points, generating ambiguous and unambiguous kinematics. We found that corticospinal excitability measured on the muscles involved in the observed action (first dorsal interosseous and abductor digiti minimi) was differentially affected by the observation of whole-hand vs. precision grips and that top-down contextual expectations interfered with these simulation processes independently from the occlusion point. This study corroborates longstanding literature on the continuous integration between kinematics and contextual information for the proper action understanding in social scenarios.

## POSTERIOR ERP COMPONENTS AS A MARKER OF TARGET SELECTION IN FEATURE GUIDED VISUAL SEARCH

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The N2pc event-related potential is a component that reflects the covert deployment of visuo-spatial attention to target stimuli displayed laterally relative to fixation. Recently, an analogous component, named N2pcb, has been proposed as a marker of the deployment of visuo-spatial attention to targets displayed on the vertical midline. Two studies that investigated the N2pcb found analogous results, using however two different algorithms for its computation. One study subtracted the ipsilateral activity elicited by a lateral target from the bilateral activity elicited by a target displayed on the vertical midline, whereas the other subtracted the bilateral activity elicited by target-absent displays from the bilateral activity elicited by a target displayed on the vertical midline. Here we show both algorithms estimate properly the N2pc as well as the N2pcb components. In addition, we explored whether the singleton detection positivity (SDP) component, a posterior bilateral positivity temporally concomitant to N2pc recently reported in studies using singleton search, could be observed in the present study in which a target was defined by a combination of features. Given that such component was indeed found using feature search, we named it posterior processing positivity (PPP).

## PERCEPTION 2

## IT'S ABOUT TIME: THE ROLE OF TASK DEMANDS IN SPATIAL ASSOCIATIONS FOR TEMPORAL DURATIONS

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The spatial–temporal association of response codes (STEARC) effect involves faster left-hand responses to early-onset events and faster right-hand responses to late-onset events. This effect has only been established with direct tasks; no research using indirect tasks with auditory cues have been conducted. Using a procedure similar to that used by Ishihara et al. (2008), the current study investigated the occurrence of the STEARC effect in indirect tasks across three experiments. Experiment 1 was a conceptual replication of the original study, in which participants were explicitly asked to discriminate the onset (early vs late) of a target sound after listening to a sequence of auditory clicks. In Experiment 1, a STEARC effect was found, thus replicating the study by Ishihara et al. Experiments 2 and 3 followed the same procedure as Experiment 1, but participants were asked to discriminate the timbre of the stimuli (indirect task) instead of directly assessing time variations. In both experiments, no STEARC effect was observed. This shows that the auditory STEARC effect is only elicited when temporal information is explicitly processed.

## A MOBILE PHONE KEYPAD AFFECTS THE SNARC EFFECT DEPENDING ON TASK DEMANDS

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Previous literature highlighted the importance of order in the SNARC effect. The present study investigated how the order elicited by the context of the stimuli interacts with task demands to modulate the SNARC effect. In three experiments, numbers were presented in the context of a mobile-phone keypad, which elicits an atypical numerical order. Three different tasks were employed, each one eliciting a configuration either consistent (Experiment 1), inconsistent (Experiment 2) or unrelated (Experiment 3) with the order elicited by the keypad. In Experiment 1, the task required to classify numbers based on their spatial position on the keypad. Results showed a spatial association consistent with the keypad, indicating an effect of the context's order over the SNARC effect. In Experiment 2, participants performed magnitude classification. No association emerged, probably due to the conflict between the order elicited by context and task demands. In Experiment 3, parity judgement determined the regular SNARC effect, suggesting that it was not influenced by the context's order. Overall, results indicate that the context alone cannot alter the SNARC effect, unless it is reinforced by task demands.

## ASYMMETRY DISRUPTS THE SELF-PRIORITIZATION EFFECT

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Individuals can create strong and reliable associations between an arbitrary stimulus, such as a geometrical shape, and the self. Here, in two experiments we tested whether such an association can be modulated when the symmetry of the shape is considered. Participants were first asked to associate, in one condition, the 'self' with symmetrical shapes and a 'stranger' with asymmetrical shapes, while, in another condition, the association was inverted (i.e., self-asymmetrical vs. stranger-symmetrical). The two conditions were manipulated either within (Experiment 1, lab-based) or between (Experiment 2, online) participants. In both experiments, participants were involved in a speeded classification task requiring to classify a given shape (symmetrical vs. asymmetrical) and a label ('you' vs. 'stranger') as matching or nonmatching with the previously learned association. In both experiments, faster responses and greater accuracy emerged when both the shape and the label matched with the self-identity with respect to all other conditions, but this was true only for the condition in which the self was associated with symmetrical shapes. Indeed, when the self was associated with asymmetrical shapes, no evidence of such a self-prioritization effect emerged at all.

## AUGMENTED GAZE IN ELDERS

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In judging the natural speed of dynamic visual scenes, elders show a large underestimation bias. We asked whether a similar bias is present in judging the shifts of the visual field produced by head rotations, where efference copy and/or proprioceptive signals of head movements may be sufficient to ensure unbiased judgments. We designed a task where participants wearing a head-mounted display adjust the visuo-motor gain (the ratio between head rotation and the ensuing visual field rotation) while exploring an immersive scene with head movements until reaching a condition reputed to be natural (PSE for natural gain) or optimal for exploring the environment (PSE for optimal gain). We measured gain adjustments and head movements over time. Preliminary results showed large uncertainty in judging the natural visuo-motor gain, and a tendency for optimal visuo-motor gain to be higher than the natural gain. We discuss these data in terms of visual speed bias and within the context of the Telegoclette project, aimed at enabling elders living in assisted residences to virtually and remotely ride a real bike in a real environment together with a real biking buddy and in real time. Providing an augmented visuo-motor gain could enhance the immersivity power of virtual biking experience.

## IT'S SNARC O'CLOCK: THE SALIENCE OF THE CONTEXT MODULATES SPATIAL-NUMERICAL ASSOCIATIONS

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The SNARC effect (Dehaene, Bossini, & Giraux, 1993) consists in faster left-key responses to small numbers and faster right-key responses to large ones. Bächtold et al. (1998) showed that placing numbers in a clock face context (small numbers/right, large numbers/left) can reverse this pattern. To further study how this 'atypical' context can alter the SNARC effect, we modulated the clock face salience through task demands. In Experiment 1 (low salience), participants were exposed to the clock face context and instructed to mentally represent it during magnitude classification and parity judgement. A regular SNARC effect emerged, suggesting that the context did not affect the results. In Experiment 2 (medium salience), participants performed the same tasks with the addition of a go/no-go procedure based on the position of numbers on the clock face. No SNARC effect emerged, probably because task demands determined a moderate conflicting interference of the context. Finally, in Experiment 3 (high salience), participants classified numbers based on their position on the clock face. In line with Bächtold's results, a reversed SNARC emerged. Overall, these findings suggest that the context can modulate the SNARC effect only if task demands enhance its salience.



# DEVELOPMENT

## A READFREE TOOL FOR THE IDENTIFICATION OF READING DISORDERS IN MONOLINGUAL AND MINORITY-LANGUAGE CHILDREN: A VALIDATION STUDY

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We present the “ReadFree tool”, a computerized battery of 12 visual and auditory tasks developed to identify poor readers also in Minority-Language Children (MLC). These students have a peculiar language experience that often prevents a proper evaluation of potential reading disorders. To validate the tool, we tested the task-specific discriminant power on 142 Italian-monolingual participants (8-13 y.o) divided into monolingual poor (mPR; N = 37) and good readers (mGR; N = 142) according to standardized Italian reading tests. The performances at the discriminant tasks were entered into a classification and regression tree (CART) model to identify mPR and mGR. The set of classification rules extracted were applied to the MLC’ performance and the ensuing classification was compared to the one based on Italian reading tests. Results revealed that Auditory Go-No/Go (Regular), RAN and Entrainment100bpm were the most discriminant tasks. When compared with the clinical classification, the CART model accuracy was 86% for the monolinguals and 76% for the MLC. Based on our evidence, the use of language-independent tasks represents a good solution to face the difficulty in evaluating MLC for learning disorders by focusing on cognitive markers and going, thus, beyond reading.

## DEVELOPMENT OF AUDIOTACTILE INTEGRATION IN SIGHTED AND BLIND CHILDREN

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When auditory and tactile stimuli are presented simultaneously but in two adjacent positions, the auditory location is perceived mistakenly as coming from the exact location as the tactile stimulus. The question remains whether this effect is already present in childhood. Nevertheless, two open questions remain: when along with childhood, this effect develops, and whether the absence of vision might play a key role in this effect, given that regarding the spatial domain, the most reliable sense is vision. In the present study, we tested a group of sighted and blind children in an audio-tactile spatial ventriloquism task. Children could be presented with a tactile, auditory, or audio-tactile stimulation, in random order, on the forearm and asked whether the stimulation, regardless of sense, was closer to the hand or elbow. We find that both blind children and controls at the age of 10 years do not appear to integrate audio-tactile information and that the attraction of touch over sound is attenuated compared to adults. This result suggests that audio-tactile ventriloquist has a long developmental trend of development.

## THE HEXACO MIDDLE-SCHOOL INVENTORY: A NOVEL MEASURE OF PERSONALITY TRAITS IN ADOLESCENTS AND ITS PSYCHOMETRIC PROPERTIES

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We aimed at developing and validating a novel measure of personality traits in adolescents, the HEXACO-Middle School Inventory (MSI). We started with a pool of 64 items for each of the six HEXACO factors. In Study 1, we administered the HEXACO-MSI to 714 adolescents ( $M_{age} = 11.94$ ,  $SD = 0.91$ ). Using Principal Component Analysis (PCA) and extension factor analysis, we identified the best 32 items for each factor, except for Openness to Experience, and then we verified the psychometric properties of the scale. In Study 2, we administered the latest version of the HEXACO-MSI, with additional items to adequately represent each facet, to 1182 adolescents ( $M_{age} = 12.04$ ,  $SD = 0.92$ ) and the Observer version to their parents. Using PCA and extension factor analysis, we identified the best 32 items for each factor and evaluated the psychometric properties of the scale. The results showed that the final version of the HEXACO-MSI had good levels of internal consistency and a good validity, but also that the six personality traits in adolescents were relatively stable at a distance of one year. Having a HEXACO questionnaire appropriate to adolescents allows a more complete and detailed understanding of their personality.

## THE ROLE OF VISION IN CALIBRATING THE DEVELOPMENT OF THE SPATIAL COMPETENCE

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Spatial competence is based on the spatial reference frame system, consisting of egocentric and allocentric coordinates. Here, we tested the spatial abilities of children with and without visual impairments to assess the development of spatial competence. We assess if auditory and visual allocentric coordinates mature with the same developmental steps and if partial or complete vision loss causes a delay in this development. We employed Simon's task in the visual and auditory modalities, introducing a conflict between the frames by making children perform with hands crossed. The results show that sighted children progress over time with no difference between visual and auditory performance. Instead, low-vision children show a delay in the development of spatial frame, exhibiting a decreased performance with crossed hands only in the visual task but unimpaired performance in the auditory modality. Finally, blind children showed impaired performance also in the auditory modality. Our results confirm the role of vision in guiding other senses to process spatial information. Indeed, when the visual input is available, even if poor, it is sufficient to calibrate the allocentric coordinates. Instead, the absence of sight determines an impairment also in the other modalities.

## EMOTION 2

## IMPLICIT AND EXPLICIT MEASURES OF COGNITIVE CONTROL AND EMOTIONAL REACTIVITY TO HEALTHY AND UNHEALTHY FOOD CUES

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Research suggests that the eating habits of University students do not follow national recommendations. Moreover, dietary behaviors have been challenged by the ongoing COVID-19 pandemic, increasing food intake and unhealthy food choices. We investigated the interplay between appetitive food cue reactivity and inhibitory control in 24 University female students exposed to pictures of unhealthy savory and sweet food, fish and lean meat, fruit and vegetables, after an average fasting of 7.8h. Valence, arousal and craving were collected during picture viewing, while inhibitory control was measured through an emotional Go/NoGo task. Heart rate variability (HRV) at rest was used as an index of emotion regulation and cognitive control. Unhealthy savory food elicited the highest pleasantness, arousal and craving, indicating strong appetitive motivation. For this food category, a significant positive correlation between commission and omission errors emerged in the Go/NoGo task, suggesting higher interference due to greater attentional deployment. HRV negatively predicted emotional arousal to unhealthy savory food and positively predicted craving for fruit and vegetables, independent of BMI and fasting duration, suggesting that it might play a relevant role in promoting healthy choices.

## GAMMA EEG MODULATION DURING AFFECTIVE FILM CLIP PRESENTATION IN WOMEN WITH HIGH VS LOW EMOTIONAL DYSREGULATION TRAITS

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Many psychiatric disorders comprise Emotion Dysregulation as a core feature. This trait includes pervasive instability in emotion and mood management, especially concerning anger, dysphoria and impulsive behavior. To this end, starting from a healthy sample of 294 female students, we selected 25 participants in the Low (LD) and 25 participants in the High (HD) Dysregulation groups. We expected the HD group to manifest altered EEG Gamma modulation in response to emotion, especially to negative ones. EEG activity was recorded while participants were viewing 18 film clips divided into 6 emotional categories: Erotic, Scenery, Neutral, Sadness, Compassion and Fear. Results of EEG Gamma band revealed a Category\*Group interaction in which the HD group exhibited higher Gamma response to Erotic clips and to all negative clips, but did not further differentiate among the categories, showing a relatively flattened pattern. In the LD group, greater Gamma activity was found to Scenery compared to Neutral stimuli, and interestingly, greater activity was found between Compassion and all other emotional stimuli. Our findings might help to devising new tools for detecting vulnerable individuals at risk of developing more severe psychiatric disorders.



## SPATIAL NAVIGATION AND EMOTIONS: A STUDY IN VIRTUAL REALITY

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Finding one's way in spatial environments is an essential ability. Notwithstanding the well-known mechanisms underlying orientational skills, little is known about emotion's effect on such processes. Therefore, since negative emotions are deemed to inform about a threat source in the nearby space, we aimed to understand their impact on navigation. Moreover, we examined gender differences since prior research highlighted their core role. In two studies (N=70, 41 females), participants entered a realistic virtual environment twice: in phase1 to encode a route to find an object and in phase2 to recall the learned path to reach the same object again. We measured navigational performances as the difference between phases in time spent finding the target object and the distance travelled to find it. Between the two phases, participants were exposed to sixty faces showing either neutral, fearful, or angry expressions used as emotional manipulations. The effect of participants' gender was taken into account. Results showed an interaction between emotions and gender, suggesting that the exposition to fearful faces decreased navigational performances more in males than in females. Results were discussed as evidence of the intersection between navigation, emotions, and gender differences.

## CAN COMPOSERS EXPRESS EMOTIONS THROUGH MUSIC?

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The relationship between psychology and music has been the subject of studies for many decades. Since music is a multidimensional phenomenon that involves many variables, some of its aspects remain largely unexplored. For example, what role does raw composition play in this process? Can a simple score reproduced aseptically by a computer communicate specific emotions? In this empirical study, inspired by the work of Thompson & Robitaille (1992), we selected eight emotions that are commonly used in music psychology studies related to emotions. Six composers wrote short pieces to communicate each one of these emotions. Their pieces were then played by a midi sequencer and digitally exported, removing the variables related to the musicians' interpretation and the sound quality of an acoustic instrument. These recordings were then presented to listeners that were totally unaware of the purposes of the study, who were asked to evaluate what emotions the piece communicated using Likert scales. The results confirmed that the songs were able to effectively communicate to listeners the emotion intended by the composers, even when the intended emotion was of a more complex nature.

## SOCIAL COGNITION AND METAVERSE: UNDERSTANDING AND DISPOSITION TOWARDS HUMAN DIGITAL TWINS

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Metaverse refers to a digital universe more complex than VR, where the virtual world coexists with the real one. In this symmetrical reality (SR), actions are directed to synchronized digital representations of real-world objects (digital twins, DT). In line with applications concerned with the potential of flagship stores (Decentraland, 2022), our study focuses on the fashion domain with the goal of investigating the interaction between Bodily Agents and Digital Others. When selling a garment, the salesperson must understand the customer's concrete request but also the psychological one, feeling comfortable with the interaction. We assessed the modulation by 3 different human DTs: natural likeness and voice; artificial voice; artificial likeness (Artec3D Eva) and voice (AA). Besides the ability of the participants (students, clerks) to meet the request, and their possible collaborative attitude towards the digital interaction, we examined the spontaneity of the interplay. While the understanding of the need and the willingness to satisfy it in SR were not affected by the type of DT, the reported naturalness was penalized for AA. The implications for a digital transformation oriented to smart societies will be discussed, suggesting the implementation of human-centered paradigms.

## **METHODS 3**

## FUNCTIONAL ALIGNMENT ENHANCES ELECTROENCEPHALOGRAPHY (EEG) DATA'S GROUP ANALYSIS

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The functional variability of neural brain activation between individuals is well known among neuroscientists. In the case of Electroencephalography (EEG) data's group analysis, averaging over subjects in sensor space is suboptimal. Hence, recently, Haxby et al. (2011) suggested a functional alignment called hyperalignment, where high-dimensional transformations model the individual-specific and shared functional information. Nevertheless, hyperalignment mixes data across spatial brain areas, and these high-dimensional transformations are not unique, leading to interpretability problems. We cope with these issues by proposing a new functional alignment method: the ProMises (Procrustes von Mises-Fisher) model, which allows inserting topological information into the estimation process. The proposed functional alignment can then be applied to EEG data as preprocessing step, which improves the detection of sharing neural activities concerning some stimuli in group analysis.

## A PROCEDURE FOR THE ADAPTIVE ASSESSMENT OF PROBLEM-SOLVING SKILLS

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This research aims to present a new approach for developing computerized adaptive assessment and compare its performance with an existing procedure. An adaptive assessment is a test that assesses an individual by providing a customized set of problems to give personalized feedback. In particular, during the assessment, the test will adapt to the responses collected until that point, and it will propose the most informative problem. The adaptive procedure presented in this research is based on procedural knowledge space theory (PKST). PKST was proposed by Stefanutti (2019) to assess human problem-solving skills. The peculiarity of the proposed procedure is that besides execution correctness, it also considers the sequence of moves observed in the solution of a problem to increase the efficiency and accuracy of the assessment. The authors implemented the procedure in a computerized version of the Tower of London (TOL). Two simulation studies with both empirical and simulated data are presented. These studies compared the performance of the developed procedure and the continuous Markov procedure (CMP) by Doignon and Falmagne (1988a) on a set of problems from the TOL. Results show that the proposed adaptive procedure outperforms the CMP in both accuracy and efficiency.

## RANK SUBDIVISION OF EQUIVALENT SCORES AIMED AT IMPROVING NEUROPSYCHOLOGICAL TEST NORMS

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Neuropsychological assessment of cognitive function is an essential part of clinical care. Numerous neuropsychological tests are scored using Equivalent Scores (ES). The ES0 and ES4 are defined by the outer tolerance limit and the median, respectively. While neuropsychological data distributions are typically non-parametric, intermediate ESs are commonly calculated via a z-score approach. We propose that the intermediate ESs be calculated using a non-parametric ranked subdivision of the distribution of adjusted scores to calculate more accurate ESs. We conduct three simulations to explain the differences between the classical z-score method, the rank-based method, and the direct subdivision of the dependent variable. According to the results, the rank procedure can be used to divide the region between ES0 and ES4 into three equal-density areas. The z-score procedure is similar to the direct subdivision of the dependent variable. By subdividing intermediate ESs using rank-subdivision, neuropsychological tests can be scored more accurately, while also considering that the two essential points for diagnosis remain the same ( $ES = 0$  and  $ES = 4$ ). In the future, normative data definition should consider the most appropriate scoring procedure for ES.

## PROBLEMS WITH CLUSTERING CASES FROM QUANTITATIVE PSYCHOLOGICAL DATA ON INDIVIDUAL DIFFERENCES

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Unsupervised clustering methods are increasingly being used on behavioral data to discover previously undetected sub-populations of individuals within larger populations. Realistic research scenarios in psychology may not be ideally suited to this approach, however, as they feature modest effect sizes, limited sample sizes, and non-orthogonal indicators. With a systematic review in Scopus, we found that most studies in this field adopt suboptimal practices such as failing to test the one-cluster solution, failing to adopt dimensionality reduction techniques, and using far too small samples. Subsequently, in a simulation study we examined the performance of popular clustering techniques, including Gaussian mixture model, a partitioning, and a hierarchical agglomerative algorithm. Under virtually any scenario plausible in quantitative psychological research, none of the methods performed adequately in discriminating between one vs two true clusters, or in classifying individuals accurately. Under most scenarios with non-orthogonal indicators there was also a very high risk of detecting several clusters where none existed. In conclusion, it is hard for researchers in psychology to be in a condition to achieve a valid unsupervised clustering of individuals for inferential purposes.



## FEATURE SELECTION VIA BAYESIAN NETWORKS AND JENSEN-SHANNON DIVERGENCE IN PSYCHOLOGICAL PROBLEMS

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Feature selection is a typical set of methods that allows to remove the irrelevant and/or noisy features in a dataset, usually applied in machine learning. The present work aims to evaluate the advantages and applicability of a feature selection method based on conditional dependences, estimated with Bayesian Networks jointly with the distance measure of Jensen-Shannon divergence, in a classical between-group experiment. Thirty-four controls were compared with sixty dyslexics on different cognitive functions. Two logistic regression models were applied on a training set (80% of the total sample): the first model included all the variables, and the last only the feature-selected variables. The models were validated on a test set (20%). The results showed better performance (based on AIC) of the last model at the training set, and better prediction accuracy at the test set, than the complete model.

## NEUROSTIMULATION 2

## REDUCED INFLUENCE OF VISUAL CROWDING ON LETTER IDENTIFICATION DURING RIGHT FRONTO-PARIETAL TACS AT BETA FREQUENCY

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Visual objects perception depends on the communication between dorsal and ventral visual pathways in the brain for which beta-band oscillations (15-25 Hz) in fronto-parietal and parieto-occipital sensors showed to be fundamental. Visual crowding can impair such a process and induce a reduction of beta-band power. We aimed at reducing the effect of crowding during letter identification, using bifocal hi-definition transcranial alternating current stimulation (tACS) in the beta-band. Participants were asked to report the orientation of a target letter positioned nearby two flankers, while target-flankers distance was manipulated. In 3 separate sessions, we administered beta-band tACS with a right fronto-parietal montage, a bilateral parietal montage, as well as a sham protocol. Only right fronto-parietal protocol showed higher letter identification accuracy in the left hemifield with respect to sham. EEG data showed that this protocol successfully modulated power in the beta band over the stimulated sites. Results corroborate previous findings about the importance of the beta-band activity across right fronto-parietal sites for the impact of visual crowding during letter identification, paving the way for possible rehabilitation protocols for vision-related reading impairments.

## TRANSCRANIAL MAGNETIC STIMULATION TREATMENT IN ALZHEIMER'S DISEASE: A META-ANALYSIS OF ITS EFFICACY AS A FUNCTION OF PROTOCOL CHARACTERISTICS AND DEGREE OF PERSONALIZATION

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Transcranial Magnetic Stimulation (TMS) is a promising technique to improve global cognitive functioning in Alzheimer's Disease (AD). Nevertheless, we currently lack agreement between research studies on the optimal stimulation protocol. To answer this query, we conducted a systematic meta-analysis of studies in PubMed, Psycinfo and Scopus databases published in the last 10 years (2010-2021) according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Differently from prior published meta-analytic work, we investigated whether protocols that considered participants-specific neuroimaging scans for the selection of individualized stimulation targets held more successful outcomes compared to those relying on a generalized targeting selection criteria. We then compared the effect sizes of studies based on additional protocol characteristics (frequency, duration of intervention, number of stimulation sites, use of concomitant cognitive training and patients' educational level). Our results confirm TMS efficacy in improving global cognitive functioning in mild-to-moderate AD patients, but also highlight the flaws of current protocols characteristics, including a possible lack of sufficient personalization in stimulation protocols.

## THE ROLE OF FRONTAL EYE FIELD IN AGE-RELATED DIFFERENCES TO VISUAL DISTRACTORS DURING DRIVING: A NEUROMODULATION STUDY

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The ability to suppress distractors during driving changes during lifespan. The aim of the present study was to investigate the effects of different tDCS montages on the inhibition of visual distracting stimuli on responses to critical events in young and older drivers. A driving simulator task was developed in which participants had to detect brake light events while they responded to one of two distractors (names of countries and cities that appear as road signs). Each participant completed three sessions comparing the effects of different tDCS montages, i.e. conventional, high-definition (HD-tDCS) and sham stimulations over a key cerebral area for distractors suppression, the frontal eye field (FEF). Results indicated an overall better performance under the HD-tDCS condition. In particular, young participants improved their performance both in breaking light RTs and in the second distracting task. Preliminary results on older participants seem to confirm and extend results on younger ones, indicating also an increased lane-keeping performance under HD-tDCS stimulation. Taken together these results are interesting from a theoretical and methodological point of view, by demonstrating a direct effect of FEF HD-tDCS in attentional response during an ecological driving task.

## MODULATING THE NEURAL MOTOR FUNCTIONING USING TRANSCRANIAL ELECTRICAL STIMULATION TO IMPROVE FLUENCY IN PERSISTENT DEVELOPMENTAL STUTTERING

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Developmental Stuttering (DS) consists in the disruption of the normal speech flow, characterized by interrupted fluency and involuntary repetitions/prolongations of sounds, syllables, words or phrases, with frequent pauses or blocks. In Persistent DS (PDS), standard interventions like speech behavioral therapy are sometimes limited in effect, with high chances of relapse. Therefore, innovative modalities are being investigated to increase their effects such as non-invasive brain neuromodulation techniques. The present proposal describes the preliminary results of a study aimed to evaluate the efficacy of different protocols of transcranial electrical stimulation (tES; High Definition-transcranial Direct Current Stimulation -HD-tDCS-, and High Definition-transcranial Random Noise Stimulation -HD-tRNS-) on speech fluency and neurophysiological functioning of a group of adults with PDS. tES was administered on the supplementary motor area (SMA), one of the main cortical regions involved in DS neural circuits. TMS-evoked cortical activity and EEG resting state were recorded, as well as the effects on severity of dysfluencies. In future studies, the most effective neuromodulatory protocol could be associated with speech behavioral treatment to boost its beneficial effects.

## THE INTER-INDIVIDUAL VARIABILITY IN TDCS EFFECTS: A DISCUSSION ON THE CONTRIBUTION OF STABLE, VARIABLE, AND CONTEXTUAL FACTORS

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Transcranial direct current stimulation (tDCS) use grew exponentially in research and clinical settings due to the technique's safety, portability, and cheapness. Over the past years, the inconsistency and low replicability of tDCS effects on performance stimulated a wide-range debate among researchers, sometimes bringing to extreme conclusions about its ineffectiveness in modulating behavioral performance. Traditionally, findings variability has been linked to inter-study heterogeneity, such as stimulation intensity and duration, target regions, and outcome measures used. We faced the issue from another perspective, discussing evidence of variability emerging at the intra-study level, namely inter-individual differences. This source of heterogeneity has been largely neglected by literature, being the results typically analyzed at the group level. Previous research, indeed, highlighted that only a half of the studies' samples are classified as responders, being affected by tDCS in the expected direction. We reviewed and critically discussed previous evidence supporting how inter-individual differences can influence the tDCS effectiveness to contribute to increasing knowledge on enhancing protocols' efficiency and reproducibility.

## PERCEPTION 3



## PERSONALITY FACTORS, STRESS AND VIVIDNESS IN INDIVIDUAL AND TEAM SPORT ATHLETES

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Providing coaches with useful tools to help them recognize the strengths and weaknesses of their athletes is now more than ever required. The aim of the study was to explore personality factors, stress level and static/dynamic motor vividness in individual (IS) and team sport athletes (SS). The Big Five Questionnaire, Measure of Psychological Stress, State-Trait Anxiety Inventory, Vividness of Movement Imagery Questionnaire<sup>2</sup> were administered to 154 athletes. Results show statistically significant differences between two groups in IVM, the male IS sample has a higher score than female IS sample, that shows, higher levels of static vividness. High levels of perceived stress and both state and trait anxiety were also found in women practicing SS. The BFQ scores high levels in Energy factor especially in Dominance subfactor, in the male sample. The same athletes display a high level of Emotional Stability and lower Impulsiveness scores. The female athletes present higher scores of Agreeableness and Conscientiousness. The study highlighted the role of personality factors, perceived stress, and motor vividness in relation to gender and sport practiced.

## DOMAIN-SPECIFIC CORTICAL ORGANIZATION OF MULTISENSORY PROCESSES

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The present work discusses the domain-specific organization of multisensory processing at the cortical level. In a first study, we showed that the recruitment of primary sensory cortices is modulated by the domains of representation (i.e., space and time) involved in the multisensory tasks. In particular, participants showed greater activation of the occipital areas in processing audiovisual stimuli during a spatial task, while in processing the same audiovisual stimuli during a temporal task the participants exhibited a more significant response of the temporal regions. A second study, specifically focused on the spatial domain, showed that the cortical gain modulation of the visual areas is also influenced by the nature of the spatial task. In particular, an early occipital component (50-90ms post-stimulus) supported more the processing of a complex spatial representation of audiovisual stimuli (spatial bisection task), while a later occipital response (110-160ms) more strongly sustained the encoding of a simple spatial representation (spatial localization task). To conclude, these studies reveal that the multisensory nature of the primary sensory cortices is not fixed, but it is modulated by the domains of representation and the complexity of the multisensory phenomena.

## THE ROLE OF REALISM AND EXPERTISE IN VIRTUAL FACES' ELABORATION

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In recent years, virtual faces have been increasingly used as stimuli in psychological research to analyze human face perception. These stimuli indeed represent a versatile and flexible alternative to portrait photos commonly used in these experimental contexts. However, preliminary research indicates that virtual faces may be processed as a distinct category of faces and may be vulnerable to the other-race effect. As a result, they might be processed less efficiently than real faces. The present study investigated individuals' ability to recognize real and virtual faces, further considering the possible effect of virtual faces' realism and individuals' perceptual expertise with virtual faces on recognition accuracy. Participants were then asked to complete three recognition memory tasks, separately for real faces and virtual faces presented with two different levels of realism. Participants' experience with virtual faces was measured in terms of self-reported frequency of use or exposure to digital characters. Results showed that virtual faces are recognised less accurately than real faces and that this effect is greater for less realistic virtual faces. This difference was found only in individuals with little experience with digital characters.

## THE ROLE OF VESTIBULAR SYSTEM IN SPATIAL PERCEPTION

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Understanding the spatial relationship between objects and our position in the environment is crucial for survival. The visual and vestibular systems constantly interact to provide a coherent representation of the environment around us. However, it is not clear how vestibular signals are used for the localization of environmental stimuli. In the present study, we investigated the effects of galvanic vestibular stimulation (GVS) on distance encoding of visual targets. Participants were given GVS or sham stimulation while encoding the position of lights placed on the floor. Participants had to encode the position of the lights and locate them by walking towards them. We measured the performance in spatial localization and compared these measures between GVS and sham conditions. Our results indicate lower accuracy in the GVS condition than in sham, suggesting that the vestibular system contributes to the localization of visual targets in the environment. Vestibular and visual signals are thus integrated during the encoding of spatial information and the outcome of this interaction influences the ability to reach objects in the environment.

## TRAINING SOUND LOCALIZATION IN COCHLEAR IMPLANT USERS: A MULTISENSORY AND MOTOR TRAINING PROTOCOL

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Can we improve spatial hearing skills in cochlear implant users (CI)? We assessed if a reaching-to-sound training (Spatial training) improves sound localization in 20 bilateral and 17 unilateral CI users and whether its effect can generalize to different sound localization tasks. Using a crossover design, we tested generalization of training effects on two different tasks: head-pointing to sound and audio-visual attention orienting. We took advantage of virtual reality and motor tracking permitting active listening (head-movements were allowed and measured). Spatial training entailed arm movements to sounds in reaching space, to identify sound position. Wrong responses were accompanied by audio-visual feedback. As a control, participants completed a Non-Spatial training, in which reaching movements served to identify amplitude modulations in the sound. We found that the Spatial training improves horizontal sound localization in both bCI and uCI users. Crucially, training benefits generalize to a non-trained sound localization task, as well as to different sound positions. These findings have potentials for novel rehabilitation procedures in clinical context and expand the initiatives that clinicians and patients themselves can undertake to improve their experience with the CIs.

# MINITALK

## CHOOSE WITH YOUR EYES CLOSED. SHOPPING BEHAVIOR IN VISUALLY IMPAIRED AND SIGHTED PEOPLE: THE CONTRIBUTION OF NEUROPHYSIOLOGICAL, BEHAVIORAL AND SELF-REPORTING MEASURES

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The literature on the consumption patterns of specific categories of consumers, such as people with disability, remains limited to date. This study explored the explicit and implicit consumer experience of visually impaired (VI) consumers in-store. A group of VI and a control group explored three different product shelves and manipulated target products inside the supermarket, while their neurophysiological and autonomic activity was measured. Also, behavioural and self-report data were collected in relation to three main different phases of the in-store shopping experience: i) the identification of a product (recognition accuracy and time); ii) the style of product purchase (predominant sense used for shelf exploration, store spatial representation and orientation ability); iii) the consumers experience. For the VI group, higher levels of disorientation, difficulty in finding products, and repeating the route independently were found. Accuracy and recognition time vary by product category. Despite touch was the sense that most guides product recognition for the VI, it was also found to be significantly used by the controls across product categories, perhaps suggesting that in-store marketing strategies to be truly inclusive should consider developing tactile touchpoints.

## DECISION-MAKING AND FIBROMYALGIA: A SYSTEMATIC REVIEW

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Decision-making (DM) is a crucial and essential skill that involves multiple brain areas: It is the ability to choose between more options, considering external and internal variables and identifying potential paths of action that need to be assessed. Among the areas involved, some are in common with ones implicated in pain processing, such as the Fibromyalgia (FM). FM is a syndrome characterized by chronic widespread musculoskeletal pain and is associated with various symptoms, including cognitive difficulties. The current work through a systematic review that interrogated six different online databases proposes to cover most of the current research on DM combined with FM. We considered only original English-language articles with participants having a FM diagnosis and who were submitted at least one cognitive DM task. The PICOS guide was used to extract details of the studies, and a quality assessment was conducted on each paper. This research aims to obtain a comprehensive background of literature on the link between FM and DM, highlighting cases where this association has been more considered. Although we obtained a limited pool of articles, several results are already evident and can be seen as a starting point that is worth investigating through future studies.



## EMOTION RECOGNITION WITH FACE MASKS IN DEAF PEOPLE

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COVID-19 pandemic forced people to wear face masks. Research has demonstrated that the ability to infer emotions from facial configurations is significantly reduced when face masks are worn. Since the mouth region is specifically crucial for deaf people who speak sign language, we assessed the impact of face masks on inferring emotional facial expressions in adult deaf signers. 34 congenitally deaf individuals and 34 normal-hearing individuals were asked to identify happiness, sadness, fear, anger, and neutral expression on static human pictures with and without facial masks presented through smartphones. For each emotion, the percentage of correct responses with and without face masks was calculated and compared between groups. Results indicated that face masks limit the ability of people to infer emotions from facial expressions. The negative impact of face masks is significantly pronounced when deaf people have to recognize low-intensity expressions of happiness. These findings have important implications because difficulties in recognizing emotions from facial expressions due to mask wearing may contribute to the feelings of frustration and exclusion experienced by the deaf community during COVID-19 pandemic. Funding: EU H2020, ERC StG MySpace, Grant Agreement No. 948349

## INTEROCEPTIVE ATTENTIVENESS INDUCES SIGNIFICANTLY MORE PFC ACTIVATION DURING SYNCHRONIZED TASKS AS REVEALED BY FUNCTIONAL NEAR-INFRARED SPECTROSCOPY (FNIRS)

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Embodied awareness exercises incorporating Interoceptive Attentiveness (IA) have been shown to provide cognitive, affective, and motor benefits, and these effects have been associated with activation of the pre-frontal cortex (PFC). However, it has yet to be determined whether, in order to empower the PFC neural substrate, these interoceptive exercises should be performed at rest or during a specific cognitive task. This study explored the effects of an IA condition combined with a simple breath, motor, and cognitive synchronization task on PFC hemodynamics. During the explicit IA and control conditions, healthy participants conducted breath, motor, and cognitive synchronization tasks, while oxygenated (O<sub>2</sub>Hb) hemoglobin concentration was measured using functional Near-Infrared Spectroscopy (fNIRS). Greater levels of O<sub>2</sub>Hb were found in the PFC during the explicit IA compared to the control condition. This effect was especially found in the cognitive task compared to the simple breath and motor synchronization tasks. This research has implications for rehabilitation professionals who use therapeutic treatments (speech therapy and physiotherapy), as it suggests that combining IA with a cognitive synchronization task (e.g., a simultaneous vocal exercise) can boost PFC responsiveness.

## ADAPTIVE RESPONSE OF ITALIAN YOUNG ADULTS WITH AUTISM TO THE COVID-19 PANDEMIC: A LONGITUDINAL STUDY

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The COVID-19 pandemic has represented a hazardous situation for individuals with autism spectrum disorder (ASD) and their families. The difficulties, following the lockdown, have involved working from home or loss of employment, and the demands of looking after their children without the daily support of specialists. The aim of this study was to evaluate the adaptive behaviour of young adult participants with ASD after the enforcement of lockdown measures in March 2020 in a specialised centre in central Italy, by administering the Italian form of the Vineland Adaptive Behaviour Scales Second Edition (VABS II), at baseline as well as 6 months and 1 year after the lockdown. Participants with ASD who were not able to access their normal, in-person care – they were only followed at a distance (i.e. telehealth)– declined dramatically in their adaptive behaviour during the first months after the lockdown for some VABS dimensions such as the socialisation and daily living domains. The effects of the lockdown on adaptive behaviour remained after 1 year. Our results emphasise the need for immediate, continuous and personal support for people with ASD during and after the restrictions caused by the COVID-19 pandemic, in order to ensure at least partial recovery of adaptive functioning.

## JOB INTERVIEW IN FACE-TO-FACE VS. REMOTE CONDITIONS: AN HYPERSCANNING EEG AND AUTONOMIC SYSTEM STUDY

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Improving remote communication has been essential for organizations. SARS-CoV-2 pandemic fiercely accelerated the digital transition for recruitment processes. Despite this, small research was conducted to study this evolution. In this study, we explored neurophysiological differences in job interviews (4 phases: introductory, attitudinal, technical, feedback), delivered in face-to-face vs. remote conditions, on recruiters (n1=10) and potential candidates (n2=10). EEG (delta, theta, alpha, beta bands) and autonomic (heart rate, HR, skin conductance level and response SCL, SCR) data were simultaneously collected in the dyads during a simulated job interview. At an individual level, recruiters showed increased frontal theta activity, usually linked to socioemotional processing. Face-to-face conditions showed increased SCL and theta power in the central-brain cortex. We then focused on the dyads by computing intra-and inter-brain connectivity. Analyses suggest a link between face-to-face conditions and greater intra- inter-brain connectivity in low-frequency bands. Moreover, low frequencies and autonomic synchronization were higher in the last interview phases. Results call to re-examine the impact of technology and the value of electrophysiology to assess interindividual processes.

## ALTERED AUDIOVISUAL TEMPORAL BINDING WINDOWS: A POTENTIAL MARKER OF IMPAIRED SOCIAL-COMMUNICATIVE ABILITIES IN INDIVIDUALS WITH HIGH AUTISTIC AND SCHIZOTYPAL TRAITS

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Temporal binding windows (TBWs) represent the temporal range within which multisensory inputs are highly likely to be perceptually integrated, beyond objective simultaneity. TBWs can show substantial individual differences. Abnormal TBWs, found in Autism spectrum disorder (ASD) and Schizophrenia (SCZ), have been linked to altered social and communicative abilities. Here, we collected a psychophysics online dataset (N=51) to investigate the relationship between subclinical traits of ASD and SCZ and the extension of TBWs for audio-visual stimuli with different rhythmic properties, putatively relevant in speech perception. To this aim, we administered Autism-Spectrum Quotient and Schizotypal Personality questionnaires along with an audiovisual simultaneity judgment task (SJ). In the SJ task, circles and sounds sinusoidally varying in size and amplitude at different frequencies were presented. Results show that wider TBWs are associated with higher autistic traits in the Communication and Imagination domains. Moreover, narrower TBWs are linked to higher schizotypal traits in the Social Anxiety domain. These results suggest that both wider and narrower TBWs are potential intermediate phenotypes of different social-communicative domains known to be altered in ASD and SCZ.

## MEASURING MATERIALISM IN ADOLESCENTS: A STUDY OF THE PSYCHOMETRIC PROPERTIES OF THE LONG AND SHORT MATERIAL VALUES SCALE AMONG ITALIAN YOUTH

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Materialism is defined as the importance ascribed to the ownership and acquisition of material goods in achieving major life goals or desired states. Nowadays, material possessions seem function as symbols of identity and self-expression, especially among adolescents. Several studies showed that materialism is related to risky behaviors in adolescents, such as gambling behavior, problematic smartphone use, and technology addiction. Nevertheless, nowadays there is a lack of measurement tools with adequate psychometric properties to assess materialism in adolescents. For this reason, the aim of the present study was to investigate the psychometric properties of the Material Values Scale (MVS; Richins & Dawson, 1998) among Italian adolescents. Participants (N = 2112; 57% male; Mage = 16.30; SD = 1.09) were randomly split into two groups. In the first sample (N = 1054; 58% males; Mage = 16.34; SD = 1.15), psychometric properties of the original long version were investigated; in the second sample (N = 1058; 57% males; Mage = 16.26; SD = 1.04), the short version of MVS with nine items, was analyzed. Reliability and validity analyses showed that the short version appears to have a better performance in measuring the multidimensional construct of materialism in adolescents.

## THE FICKLE ART GALLERY: BEHAVIORAL INDICES OF NAVIGATION ABILITIES IN VIRTUAL REALITY

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Virtual reality (VR) experiments are an ideal tool to identify behavioral indices of good spatial navigation. Here, we employed a qualitative analysis of the navigational path of 28 subjects who freely explored a radial-shaped VR art gallery, constituted by central hall landmarks and objects (targets) located at the end of 6 out of 7 arms. Subjects were required to focus (“overt” group) or not (“covert” group) on the spatial configuration of the environment. A bird-view placement and a first-person search task, repeated after randomly changing the landmarks’ positions, were used to assess the spatial knowledge of the objects. Subjects completed questionnaires assessing the spatial navigation strategies preferentially adopted in real life and during the tasks. The explicit encoding of the spatial features led to better performances only in the placement task (i.e., overt > covert). In the search task, preliminary analyses through mixed linear models showed that performances were higher if adopting a route strategy and suggested a possible effect of the number of expositions to the targets. Behavioral indices associated with a successful navigation can guide research on the markers of disorientation in pathological diseases such as Alzheimer’s dementia.

## THE PERCEPTION OF RISK AND SAFETY IN URBAN MOBILITY FROM THE PERSPECTIVE OF VISUALLY IMPAIRED PEOPLE. AN EXPLORATORY STUDY

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The Sustainable Development Goal in the 2030 Agenda pursues inclusive urbanization. Unfortunately, improving mobility for visually impaired people (VIP) is a persistent challenge also due to the lack of data examining how urban mobility is perceived by VIP in terms of safety. Aim of this study is to investigate the mobility habits and the related perceptions of safety in a sample of 106 VIP from an urban area of Northern Italy through a semi-structured telephone interview. The interview explored the use of public transport (PT), the experience with transport services organized by volunteers, the representation of pedestrian walks and the perceptions of risk and safety related to the different modes of travel. The key findings showed that 10% of the sample did not feel safe when walking at all, 30% feel safe only when walking with a companion and the 60% feel safe also when walking independently; 20% of respondents do not use the PT, and among those who do, 52% do not feel safe. These data provide useful information for planning the spatial layout of urban environments and developing urban infrastructure and innovative devices based on the subjective perception of risk and safety, so as to promote inclusive mobility.



## CONTEXT-BASED PREDICTIONS ARE DIFFERENTLY IMPAIRED IN CHILDREN WITH AUTISM AND DYSPRAXIA

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Recent findings showed an impairment of children with autism in using contextual priors when predicting other people's actions. However, it is unclear whether this impairment is specific for the social domain and may be explained by the motor deficits present in autism or also generalizes to non-social events. To assess these issues, we tested children with autism (n=31) or with dyspraxia (n=33) as compared to peers with typical development (n=78) in a social (action) and non-social (shape) prediction task. Either task consisted of familiarization and testing phases. Familiarization phase aimed to implicitly promote expectations building. During a subsequent testing phase, videos were occluded to reduce the amount of sensorial information and induce the usage of expectations to predict event unfold. While controls' performance benefited from using contextual priors in both tasks, such facilitation was absent in children with autism, either for social or non-social task. Differently, children with dyspraxia showed poor reliance on contextual priors in the social task only. These results provide evidence for a domain independent deficit in autism in using priors to predict events, and for a domain- (social) specific deficit in individuals with deficits limited to motor competence.

## COSTS OF SHARING ATTENTION WITH OTHER PEOPLE WHILE ATTEMPTING TO IGNORE IRRELEVANT STIMULI: COMPARING HIGH FUNCTIONAL AUTISM AND NEUROTYPICAL ADULTS

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Clinical practice reveals that individuals with High-Functioning Autism (HFA) show difficulty sharing attention with unfamiliar people. We hypothesized that this difficulty could affect tasks requiring cognitive control by selectively impairing stimulus-encoding or response-selection. Twenty-one HFA and 23 neurotypical adults were involved in a two-phase study. The first phase was performed at home, through an online link, whereas the second one was held four months later in our laboratory in the presence of two experimenters. A letter-flanker task was administered in both phases. In the Stimulus-Response (SR) conflict condition, the target and flankers were assigned to the same/different response keys. In the Stimulus-Stimulus (SS) conflict condition, the target and flankers were perceptually similar/dissimilar. Two mixed ANOVAs were conducted on response times and accuracy scores with Phases (Home vs Lab), Groups (HFA, Neurotypical), SR conditions (congruent, incongruent, neutral) and SS conditions (congruent, incongruent) as factors. Results show that only HFAs' inhibition ability was negatively affected by the experimenters' presence compared to when they were alone, by reducing speed when dealing with an SR conflict and by reducing accuracy when dealing with an SS conflict.

## EMBRACE THE COMPLEXITY: AGNOSTIC EVALUATION OF CHILDREN'S NEUROPSYCHOLOGICAL PERFORMANCES REVEALS HIDDEN NEURODEVELOPMENT PATTERNS

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The most common adverse pre-perinatal events have a great impact on neurodevelopment, with avalanche effects on later life. Although the injury process starts early, effects may become evident very late. We wanted to address the impact of early insults by performing an unsupervised cluster analysis. We fed all available data, but not the group identification, into the algorithm for 114 children aged 5-10 years, with different adverse medical conditions: healthy (n = 30), premature (n=28), with diagnoses of perinatal asphyxia (n=28) and congenital heart disease (n=28). We measured general intelligence and many neuropsychological domains (language, attention, memory, executive functions, social skills). We found three emerging groups, which identify children with multiple impairments (cluster 3), with variable neuropsychological profiles but in the normal range (cluster 2), and with adequate profiles and good performance in IQ and executive functions (cluster 1). Our analysis divided our patients by severity levels rather than by identifying specific neuropsychological phenotypes, suggesting different developmental trajectories that are characterized by good resilience to early stressful events with adequate development or pervasive vulnerability to neurodevelopmental disorders.

## EXPLORING THE INFLUENCE OF STRESS ON WORKING MEMORY GATING MECHANISMS

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Working memory is the ability to temporarily maintain goal-relevant information and flexibly update this information as goals change. Optimal WM functioning depends on such maintenance-updating balance, which is controlled by an input-gating mechanism ensuring that access to WM is restricted to goal-relevant information. Stressful events could interfere with cognitive control functions, which are required to adaptively balance this operating system. However the effects of stress on WM processes is still a matter of debate. Here, we will present the results of an ongoing study assessing whether and to what extent stress differentially affects component processes of WM, namely, updating, and gate opening/closing processes. While being inspected by the experimenter, participants performed blocks of the reference-back paradigm that were preceded by blocks of either a Paced-Serial-Addition task (to induce stress in terms of high cognitive load and ego-threat) or a Paced-Serial-Repetition task (to induce comparable physiological activation, but no stress). Besides testing possible stress-related effects on the different component processes of WM, we will explore the contribution of individual differences in terms of trait rumination and worry, interoceptive and metacognitive abilities.

## THE RELATIONSHIP BETWEEN INTEROCEPTION AND SOCIAL COGNITION: A META-ANALYSIS

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Interoception, the sense of the physiological condition of the body, appears to be linked to the embodiment mechanisms. Accordingly, interoception may act as an intermediary between body and cognition. We addressed this relation via a meta-analytic approach focusing on two social cognition processes: theory of mind (ToM) and empathy. We conducted a systematic search of studies investigating the correlation between interoceptive dimensions, in terms of interoceptive accuracy (IA) and interoceptive sensibility (IS), and cognitive and affective components of ToM and empathy. Thirteen studies met our inclusion criteria. Concerning IA, significant correlations were found with ToM (ES = .32; 95% CI [0.08, 0.57];  $p < .001$ ) and cognitive empathy (ES = .57; 95% CI [0.15, 1.00];  $p < .001$ ) but not with affective empathy (ES = .42; 95% CI [-0.30, 1.15];  $p = .25$ ). Instead, a lack of studies investigating the relation between IS and TOM/empathy prevented running other planned analyses. These findings point to a specific association between core social cognition abilities and the accuracy in detecting interoceptive feelings and call for more studies on the topic that should include measures of all the dimensions of interoception.

## ARE GROUPS BETTER THAN INDIVIDUALS? TESTING GROUP ARGUMENTATION IN THE DISINFORMATION CONTEXT

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Modern society favors groups over individuals in most areas of decision-making, but groups are not exempt from social and cognitive bias. Experimental evidence from the argumentative theory indicates that group argumentation helps to increase the quality of decision-making, but this theory produced more robust evidence with problems with an intuitive wrong answer and a demonstrably correct answer. The present study tests the argumentative theory in the disinformation context. In phase 1 participants read 4 news and marked their intention to share and their judgement of truthfulness. In phase 2, participants re-read the same news and then they argued their position regarding its accuracy in a context of individual analysis or in a group discussion (in a within-subject design). Finally, they expressed again the judgements of phase 1. Our results showed that group had a positive influence on judgement accuracy. Moreover, if the group condition preceded the individual condition, then the group's positive influence affected both the judgements after group discussion and after the individual analysis. Group argumentation represents the cognitive strength of the group also in an applicative context, increasing the ability to recognize fake news.

## MODULATION OF THE AFFECT FACIAL EMOTION RECOGNITION USING A DEVICE COMBINING PRISM ADAPTATION AND SERIOUS GAMES IN CHILDREN WITH AUTISM SPECTRUM DISORDER

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Autism Spectrum Disorder (ASD) is a neurodevelopmental condition displaying a typical neuropsychological profile in addition to the specific behavioral, communicative and social cognition patterns. In the present study, 15 ASD subjects were tested with NEPSY-II in the baseline condition and following two weeks of cognitive training with Mindlenses, a medical device combining prismatic lenses with digital cognitive training (10 sessions) through a series of serious games. Prior evidence showed that prism adaptation increases the excitability of fronto-parietal areas ipsilateral to the visual field deviation induced by prisms. Rightward digital prism adaptation was made by presenting lateralized visual stimuli on an 11" tablet. In each session, prism adaptation was followed by a battery of 8 digital serious games stimulating visuospatial and executive functions. The main results showed a significant improvement of ASD in the affect facial emotion recognition tasks. The performance of ASD in these tasks following the training reached that of neurotypical controls. These findings, if confirmed across larger series of studies, may suggest a new training option for cognitive-affective difficulties in ASD based on non-invasive modulation of right hemispheric excitability.

## REPEATABLE BATTERY FOR THE ASSESSMENT OF NEUROPSYCHOLOGICAL STATUS (RBANS): ITALIAN NORMATIVE DATA FOR OLDER ADULTS

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Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) is increasingly applied for measuring cognitive functioning in older individuals, being potentially suitable in Alzheimer's disease prevention studies. Our intent was to overcome limitations of the original Italian validation for older ages (>60), ie, under-representation of older classes, no correction for education and no normative data for Subtests. Participants (60-79;N=173) were recruited at Center for Memory Disturbances, University of Perugia. We used a regression-based model to assess the effect of age, education, and gender on RBANS Subtests, Indexes and Total scores. The obtained norms were compared with the original normative data. Multiple linear regression showed that age and educational level influenced performances on most Scores. When compared with original normative values, our percentiles distribution of Indexes and Total scores did not reveal significant differences. Our study further improves the robustness of RBANS for the assessment of cognitive functioning in older adults. Obtained normative values are not in disagreement with the existing data. The possibility to correct for Subtests could make RBANS a more precise measure for capturing subtle cognitive deficits in prevention studies.



## VISUOSPATIAL WORKING MEMORY PERFORMANCE AND EMOTION: A POSSIBLE ROLE FOR A SELECTIVE REHEARSAL

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Determining whether one can control which items receive the benefit of maintenance after encoding a larger set of information into visuospatial working memory (VSWM) is of critical theoretical importance. In a previous study we have found that the incidental presentation of emotional pictures increased memory for object location when neutral and emotional stimuli compete with one another for access to WM. The aim of the present study is to verify if selective rehearsal plays a role in this competition effect. To address this question, we use the item method directed forgetting (DF) paradigm in an object relocation task. After displaying a simultaneous array of 8 black rectangles, 4 negative and 4 neutral pictures (chosen from IAPS) appeared sequentially over each rectangle. Emotional and neutral pictures were followed by either the instruction to-forget (TBF cue) or to-remember (TBR cue) the rectangle's position. Participants repositioned the rectangles as accurately as possible after all stimuli had disappeared. Results show that rectangles associated with the TBR cue were better relocated than those associated with the TBF cue. Interesting, DF prevents the effect of emotion on VSWM performance, suggesting that selective rehearsal might be involved in the competition effect.

## HOW RESILIENCE INFLUENCES DONATION BEHAVIOR: A NEUROMARKETING STUDY

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In recent years there has been a growing interest in the role played by emotions in determining willingness to donate when viewing social campaigns. According to Bennett (2014), campaigns are most effective when they elicit 'mixed emotions' (alternating between negative emotions from describing the problem and positive emotions from being able to help). Our study investigates this phenomenon by collecting personality variables and neurophysiological measurements. Our aim is to demonstrate that personality variables can influence the emotions experienced when watching social campaigns and, thus, the willingness to donate. We are administering a spot selected during a pilot study to 150 subjects. Personality variables and neurophysiological data (EEG) is being collected in conjunction with the administration of the spot. The results will allow to test the following hypotheses: - Resilience affects the experience of mixed emotions while watching the campaign; thus, higher scores on this dimension are expected to positively affect the propensity to donate. - In low resilient individuals the EEG withdrawal index (Vecchiato et al., 2012) detected at the time of exposure to the problem is longer lasting than in high resilient individuals.

## SHAPE OF YOU! PHYSICAL ACTIVITY MAKES YOU BIGGER

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We investigated the effects of physical exercises on body image perception after food intake. In a single-blind study, 58 healthy university students were assigned to two conditions: indoor or outdoor physical activity or no physical activity (control group). After having tasted a snack, participants filled a Visual Analog Scale (VAS; De Boer, et al. 2004) to measure their current affective state. Participants in the physical activity group performed 4 min of stepping/walking while the control group was asked to wait 4 min before the next task. Both groups then performed a modified version of the Daurat-Hmeljiak Test (Daurat-Hmeljiak et al., 1978) to assess their individual's body image. Participants who exercised perceived their bodies to be larger, especially for height and legs, than the control participants, regardless of the type of activity (indoor or outdoor). These data suggest that physical activity could influence one's body image through increased attention or awareness of body parts involved in physical activities or through sensory feedback. Since misperception of body image has a negative effect on emotional state and eating behavior, the results of our study could have relevant both theoretical and clinical implications.

## THE INFLUENCE OF SOCIAL SHARING ON EMOTIONAL EXPERIENCE AND INTER-BRAIN SYNCHRONY

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Music represents one of the most pleasurable stimuli throughout our lives, which most of us like to share with others in social contexts. The social sharing of an event increases its perceived emotional intensity activating the reward system. We aimed at investigating whether sharing music with another person could increase the perceived pleasure while promoting inter-brain synchrony (IBS). In an fNIRS hyperscanning study, dyads listened to their favorite and experimenter-selected music together or alone while their pre-frontal cortex (PFC) activity was recorded. Preliminary behavioral results (N=20, expected N=60) showed that emotional experience (pleasure, valence and arousal) is positively modulated by the social context, the music reward sensitivity, the closeness of the relationship and the concentration level. In terms of IBS, we expect to find higher values in the shared music listening condition.

## SPATIAL FREQUENCY TUNING OF BODY GENDER ADAPTATION

*Giulia D'argenio (Università degli Studi di Udine)*

Adaptation to specific body stimuli leads to biased visual aftereffects to the opposite direction. We report a study on the parallel, cross-transfer and contingent aftereffects of body gender adaptation across high- (HSF) and low- (LSF) spatial frequency (SF), which tap, respectively, on parvo- and magnocellular channels. In Experiment1, we exposed participants to female or male bodies, presented non-filtered or containing only HSF or LSF information; then, we asked them to recognize the gender of non-filtered androgynous models. Independently from the SF of the adapting bodies, adaptation to female or male body made non-filtered androgynous bodies to appear as more masculine or feminine, respectively. In Experiment2, we separately adapted participants to HSF or LSF stimuli and tested the aftereffects on both SF stimuli. We showed significant results for both the adapted and non-adapted SF, pointing to cross-channel transfer of aftereffects. In Experiment3, we exposed subjects, within the same session, to opposite gender-typing features in the two SF channels and tested aftereffects on both SF stimuli. While HSF stimuli were consistently adapted to their SF-tuned gender, no effects were detected for LSF stimuli, suggesting greater HSF-to-LSF cross-transfer of gender adaptation.

## DOES SUPERIOR AUTOBIOGRAPHICAL MEMORY ENHANCE CREATIVE THINKING?

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Creative ideas are thought to result from flexible recombination of concepts from memory. A growing number of behavioral and neuroscientific studies provide evidence of a link between episodic memory and divergent thinking; however, little is known about the potential contributions of autobiographical memory to creative ideation. To provide a novel perspective on this issue, we assessed measures of divergent and convergent creative thinking in a cohort ( $n = 14$ ) of rare individuals showing Highly Superior Autobiographical Memory (HSAM). The HSAM cohort completed memory tasks in addition to a battery of creativity measures, including the Alternative Uses Task, Consequences Task and Remote Associates Task. We performed statistical analyses to establish whether there were any significant differences between HSAM and controls across these measures. Although HSAM participants were superior in the recall of autobiographical events compared to controls, we observed no overall difference between the groups in relation to the creativity measures. These findings suggest that the constructive episodic processes relevant to creative thinking are not enhanced in individuals with HSAM, perhaps because they are narrowly focused on consolidation and retrieval of autobiographical events.

## EMOTIONS SCALE RELATED TO GREEN FOOD PURCHASE: VALIDATION AND ADAPTATION

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Green consumption is important to address ecological problems, and research has shown that emotions have an important role in consumers' choices. This study aimed to adapt a questionnaire developed to measure emotions elicited when oneself (Pride) and others (Respect) buy and when oneself (Guilt) and others (Anger) do not buy conserving household appliances (Wang, 2016) shifting the focus to green food purchase. We used an online survey on 865 Italian adults (65% female, age range 18-84). We run confirmatory factor analysis that supported the original 4-correlated-factors structure. It showed good reliability ( $\alpha$  between .89 and .94;  $\omega$  between .89 and .94) and measurement invariance up to the full scalar invariance across people who personally do/do not buy and people who buy sometimes/often green food, and up to the partial scalar invariance across people who do/do not work in the ecological field. The hypothesized model showed a better fit compared to other models (positive and negative emotions, self and other-related emotions). All factors were correlated with criterion measures as expected.

## SLEEP DIFFICULTIES IN PATIENTS WITH EATING DISORDERS

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Eating disorders (ED) are characterized by negative beliefs regarding body shape and weight, unhealthy eating behaviors, and high levels of anxiety and depression. Although clinical observations and few controlled studies seem to indicate sleep difficulties in individuals with ED, the literature on sleep difficulties among people with eating disorders is scarce and often based on data from self-report measures only. Here we investigate subjective (questionnaires) and objective (one week of actigraphy) sleep characteristics in a cohort of 15 female patients ( $M_{age}=17.3\pm 3.1$  years) consecutively admitted to a day-hospital ED treatment program at the Padova University Hospital (Italy). Fourteen patients had a diagnosis of anorexia nervosa and one patient suffered from bulimia nervosa. Thirteen patients (86.7%) reported sleep complaints ( $PSQI>5$ ) and a morning (26.7%) or intermediate (73.3%) chronotype. Ten patients showed mild to moderate symptoms of insomnia. Actigraphic data showed that participants slept on average  $6.8\pm 0.7$  hrs, with a wake after sleep onset of  $81.4\pm 36.7$  min, and a sleep efficiency of  $82\pm 7\%$ , indicating poor objective sleep quality. Overall, these preliminary data suggest that patients with eating disorders experience both subjective and objective sleep difficulties.



## CUSTOM GUIDE: A USER-FRIENDLY APP TO GENERATE VISUAL SETS OF ELEMENTS

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Non-symbolic numerical processing is typically investigated by assessing behavioral or neural responses to visual arrays of elements. However, the impact of numerosity can be confounded with that of visual properties of the arrays that can covary with numerosity. It is therefore necessary to take into account the influence of continuous visual magnitudes and define them accordingly to the research question under investigation. While there are several instruments available to create visual arrays, they are often tied to a specific experimental design or a theoretical framework. Here we propose CUSTOM GUIDE, a user-friendly app that allows researchers to generate datasets of visual non-symbolic numerical stimuli with a precise and flexible control of several visual magnitudes (e.g., surface of the elements, convex hull). The app allows the creation of single arrays or pairs of stimuli, to generate datasets for a wide range of experimental paradigms. Moreover, it offers the possibility to easily define correlation direction or congruency between numerosity and other perceptual features as well as manually define the intended parameters. CUSTOM GUIDE represents a valuable tool for the investigation of numerical and non-numerical magnitude and ensemble perception.

## POST-ENCODING EMOTION AND NEUTRAL EPISODIC MEMORIES: DISENTANGLING BETWEEN VALENCE AND AROUSAL EFFECTS

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Events occurring immediately before emotionally charged experiences are better remembered than those before ordinary situations. Previous studies have demonstrated that such a post-encoding emotion effect on prior neutral episodic memories may depend on both valence and arousal dimensions. However, these studies used single-item recollection, whereas episodic memories involve an associative binding between multiple sources of information, such as people, objects and locations. In this study, we investigated the effect of post-encoding valence and arousal on neutral associative memories. Participants were presented with 24 triplets of neutral images, always consisting of a face, an object, and a location. The encoding of each triplet was followed by a sound selected from IADS. The sounds belonged to four categories: negative (high and low arousal) and neutral (high and low arousal). After 24 hours, participants completed a recognition test, in which they had to match images belonging to the same triplet. We found that associative memory is higher for the stimuli belonging to the triplets followed by negative sounds, regardless of their arousal level. These results suggest that post-encoding valence is selectively involved in the memory boosts for prior neutral events.

## THE INSTINCT TO EAT: THE ROLE OF AUTONOMIC NERVOUS SYSTEM IN INFLUENCING EXECUTIVE RESPONSE TOWARD FOOD STIMULI

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The current society, characterized by a food-abundant environment, may contribute to the tendency to over-eat. Previous research confirms altered attentional response towards food stimuli which can influence dys-regulated eating behavior via executive functions. The Neurovisceral Integration Model proposed a role of the integration between biological and cognitive systems in the environmental adaptation of the organism. It may indicate a role of the autonomic response (via heart rate variability; HRV) in influencing executive response toward food stimuli. One-hundred and twenty young adults (18-30 years) participated in the study (26% of the sample presented overweight condition). All the participants completed a modified version of the Stroop task with hypercaloric and hypocaloric food stimuli. HRV was recorded in resting, reactivity, and recovery condition. No differences emerged between overweight and normal weight condition in HRV indices. However, a mediator role of HRV was reported in the association between executive performances and weight condition, particularly in the case of hypercaloric food stimuli. These preliminary results support the evidence of a mediator role of the autonomic system in influencing executive response toward food stimuli in the general population.

## I MAY HAVE MADE A MISTAKE, BUT I AM NOT UNETHICAL: A PROCEDURE TO PROUDLY COUNTERACT GUILT

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We investigated whether a counterconditioning procedure based on moral pride could help effectively cope with guilt. We asked 89 participants to first read a story and identify with the protagonist, who was blamed of having committed a guilt. Next, by showing them neutral stimuli associated with guilt phrases, we conditioned the neutral stimuli on guilt. At this point, participants were randomly assigned to two conditions to see which most effectively reduced guilt: (1) counterconditioning, in which we replaced guilt associations with moral or justificatory stimuli (2) distraction, in which we introduced an external stimulus (external inhibition). Results showed a more consistent decrease in guilt perception in the moral counterconditioning condition. Because guilt plays a key role in Obsessive Compulsive Disorder, the results of our study may have important clinical implications for future treatments of this disorder.

## REBUILDING THE BODY FROM THE INSIDE: INTEROCEPTION AND THE BODILY SELF FOLLOWING SPINAL CORD INJURIES

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Spinal cord injury (SCI) exerts devastating effects on the neural systems that provide awareness of bodies, leading to disturbances in the sense of a bodily self. Recent research investigate bodily self-awareness in SCI via different multisensory and sensorimotor stimulation paradigms. However, the contributions of interoceptive-visceral information remain largely unclarified. Accordingly, we investigate changes in body ownership and interoception in SCI patients. 30 patients were assigned to higher or lower thoracic lesions groups based on their injury levels (i.e. affecting or not visceral and cardiac afference). Body ownership and interoceptive accuracy were measured. Results show a relationship between the autonomic completeness and the level and severity of SCI. Patients with higher thoracic lesions presented lower interoceptive accuracy. Although patients with higher thoracic lesions appear more sensitive to multisensory stimulation, no differences were found in global body ownership. Various factors might explain these results, ranging from interoception to vision. The sense of the body is thought to be constantly built upon multiple sources of sensory information. Interoception could still improve bodily self-awareness and improve the embodiment of assistive tools in SCI

## INVESTIGATING SEMANTIC PREDICTION AND MOUTH CUES DURING AUDIOVISUAL SPEECH PROCESSING IN COCHLEAR IMPLANT USERS

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Understanding speech is extremely challenging for deaf people with cochlear implants (CI), given the relatively poor encoding of acoustic information. Research shows that being able to predict linguistic information aids the perception of degraded speech. Furthermore, articulatory cues visible from the speaker's mouth, conveying some information on the speech sounds produced, helps to disambiguate and identify speech sounds. In this research we will investigate how semantic prediction is exploited in CI users compared to hearing controls (HC) while seeing someone speaking, and whether this interacts with mouth information to compensate for suboptimal speech perception. To this aim, we will analyze oscillatory (alpha and beta frequency bands) and ERP (N400) correlates of prediction from EEG data during an audiovisual sentence comprehension task, manipulating word predictability (high–low) and availability of mouth information (covered–uncovered). We are currently starting data collection (planned N for each group = 40) and will present preliminary data. This study will contribute to the understanding of the fast neural dynamics underlying audiovisual speech comprehension, and how semantic predictability and mouth cues are exploited in people with impaired auditory processing.

## THE TEST-RETEST RELIABILITY OF THE IOWA GAMBLING TASK

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The Iowa Gambling Task (IGT; Bechara et al., 1994) is a suitable approach to measuring decision making in a laboratory setting. The task involves four decks of cards, and participants are asked to choose one card at a time. For two decks (A and B), choosing a card is followed by a high gain of play money, but the selection of a card is followed at unpredictable points by high penalty. For the other two decks (C and D), the immediate gain is smaller, but the future loss is also smaller. To the best of our knowledge, no previous study tried to assess the test-retest stability of the IGT. The aim of the present study was to assess the test-retest reliability of the IGT in a sample of 134 adult participants (male = 42.5%, female = 56.7%; mean age = 26.15 years, SD = 5.82 years). Two different test-retest reliability coefficients (i.e., the Spearman  $r$  coefficient between baseline scores and retest scores, and internal consistency reliability estimates) were computed (e.g., Schatz & Ferris, 2013). Our findings showed the importance of relying also on the internal consistency of the IGT, suggesting that the temporal stability may not be the best way to test reliability in this type of task, due to a possible learning effect.

## NEUROANATOMICAL CORRELATES OF SCREENING FOR APHASIA IN NEURODEGENERATION BATTERY IN NON-FLUENT VARIANT OF PRIMARY PROGRESSIVE APHASIA

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Non-fluent variant of Primary Progressive Aphasia (avPPA) is characterized by language impairment due to atrophy of left inferior frontal gyrus and left insula cortex. Recently, the Screening for Aphasia in NeuroDegeneration (SAND) has been proposed as screening battery for language features in PPA. Thirty-one avPPA patients underwent a language assessment and an MRI scan. Raw scores of SAND subtests were used as proxies to explore structural neuroanatomical correlates, applying univariate and multivariate approaches. Picture naming total scores showed a direct correlation with bilateral temporal regions/networks. Considering category-specific subscores, living items demonstrated a bilateral temporal correlation, whereas non-living items correlated only with left temporal regions/network. Auditory sentences comprehension items showed a direct correlation with left temporal regions/networks, whereas single-word comprehension did not show any significant correlation with the considered regions/networks. Finally, a bilateral temporal correlation was demonstrated for words and non-words repetition, as well as a left-sided correlation for the sentences repetition. Results highlighted that specific network-based disruptions characterize the profile of avPPA patients.



## THE LEFT SIDE OF GESTURES

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The “Left Perceptual Bias” (LPB) for faces is the effect for which the left side of a picture of a face is used to a greater extent than its right side as shown in a wide variety of experimental tasks. The present work investigated the presence of a LPB in recognizing hand gestures in two experiments. The role of the side of stimuli presentation (left /right), stimuli orientation (palm/back), participants’ handedness and gender were analyzed. Participants were presented with images of meaningless gestures performed by an actor with the right or left hand, from a palm or a back view. Immediately afterward, participants were shown a drawing and had to discriminate whether it represented the same gesture or not. In the first experiment, the task was administered to a sample of right-handed participants, half males. Results showed shorter response times for stimuli presented on the left side and for those shown from the palm. No gender differences were observed. The second experiment included a sample of left-handed participants and the LPB was replicated. Taken together, our results suggest an interpretation of the bias in terms of asymmetries in perceptual processing rather than the involvement of motor representations.

## MEASURING GAMBLING CRAVING AMONG ADOLESCENTS: THE PSYCHOMETRIC PROPERTIES OF THE GAMBLING CRAVING SCALE

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Although craving is an important feature of adolescent problem gambling, there is little attention on tools capable of providing a valid and reliable measure of gambling desire with this age target. A brief scale to assess the different aspects of the gambling-related craving is the Gambling Craving Scale (GACS; Young & Wohl, 2009), a multidimensional instrument comprising nine items assessing three different dimensions: Anticipation, Desire and Relief. This study aims at investigating the psychometric properties of the GACS in Italian adolescents. Participants were 2496 adolescents (59% males,  $M_{age} = 16.40$ ,  $SD = 1.22$ ) attending high school. Through confirmatory factor analyses, a three-factor structure was supported ( $CFI = .95$ ). The internal consistency was good for all the factors and for the total scale. As regards the validity, the three GACS resulted to discriminate across non-problem and at-risk/problem gamblers, and correlated with a positive perception of gambling.

## NEUROMODULATION EFFECTS ON IMPLICIT DECISION-MAKING: PRELIMINARY RESULTS ON INTERTEMPORAL CHOICE MOUSE KINEMATICS IN COCAINE ADDICTION

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Cocaine dependence is a behavioral addiction associated with dysfunctions in the reward system and prefrontal cortex activity. In patients with cocaine use disorder (CUD) one of the focal points is the inability to delay gratification and decision-making impairment. Neuromodulatory intervention represents a potential treatment for reducing delay discounting (DD) and addictive behavior in patients. Here we investigated the implicit mechanisms underlying the DD behavior by tracking mouse kinematic during an intertemporal choice task (ICT). We collected ICTs and kinematics measures in 11 CUD patients treated with 2-week intensive repetitive transcranial magnetic stimulation (rTMS) and in 10 CUD patients undergoing sham stimulation. Each high frequency (15 Hz) rTMS session was delivered on the left DLPFC. DD was measured before and after rTMS treatment. Despite a non-significant reduction in DD, preliminary results highlight a significant difference in the mouse kinematics between the two groups with straighter-line trajectories and shorter response times when the delayed reward was selected in the post-rTMS treatment. The higher attraction toward the farsighted options suggests that neuromodulation could modify the implicit decision-making mechanism in a delayed gratification trend.

## DISSOCIATING EXPLICIT AND IMPLICIT TEMPORAL PROCESSING IN THE SUPPLEMENTARY MOTOR AREA: A HD-TRNS STUDY

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It is now widely accepted that timing tasks, and the underlying processing of temporal information can be partitioned based on whether they require an explicit or implicit temporal judgement. Several fMRI studies have reported a strong association between explicit timing tasks and the activation of the supplementary motor area (SMA). Such correlational evidence was not supported by TMS studies that failed to show any causal link between SMA activity perturbation and explicit temporal processing. The aim of our study was to ascertain whether SMA is involved in both explicit and implicit timing within a single experiment, using High-Definition transcranial Random Noise Stimulation (HD-tRNS). In this experiment, 50 university students performed two tasks that, albeit using the same stimuli, differed in the instructions, one requiring the participants to make an explicit temporal judgement, whereas the other one was based on the so-called “foreperiod effect”, constituting an implicit temporal judgement. The results showed a significant tRNS-induced overestimation effect in the explicit timing task, whereas no effects were found for the foreperiod task. Overall, these results extend previous studies by providing direct support for the causal involvement of SMA in explicit timing.

## PSYCHOLOGICAL TRAITS AS PREDICTORS OF JUDGMENTS ABOUT FOOD

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Food is considered a highly significant element for survival and, as a consequence, is widely used as a stimulus in studies that intend to investigate the processes that are fundamental to human behavior (Lloyd et al,2020; Rangel,2013). In this study, participants were first given a questionnaire for evaluating traits commonly associated with anorexia and bulimia, EDI-3 (Garner et al., 1983; Garner et al., 1991; Garner et al., 2004; Giannini et al., 2018) and subsequently were asked to rate food images on 4 different dimensions: valence (e.g., “How positive / negative would you define the food represented in the image?”), Arousal (e.g., “How much are the sensations you get when looking at the food in the image intense?”), palatability (e.g., “How palatable is the food represented in the image for you?”) and social interaction (e.g., “How much would you share the food represented in the image? with another person?”). Preliminary data show significantly different evaluations depending on the score obtained at EDI-3. In general, the goal is to obtain a database of food stimuli validated for experimental research aimed at investigating, for example, the relationship between body representation and food stimuli in healthy participants and with traits attributable to Eating Disorders

## CAN MATERNAL TOUCH REGULATE INFANTS' ATTENTIONAL BIAS TOWARD FEARFUL FACIAL EXPRESSIONS?

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Maternal touch is a non-verbal cue that can regulate children's and infants' internal states when facing distressing situations, such as angry faces (Brummelman et al., 2019; Addabbo et al., 2021). The present study explores whether and how maternal touch modulates infants' attentional bias toward fearful expressions. The procedure consists of an overlap task where the infant is shown an emotional face (happy, neutral, fearful) on the center of the screen followed by a peripheral target stimulus. 7-month-old infants (N=48) were divided into two groups: in the No-Touch group (N=24), mothers stand still next to the infant without touching their child; in the Touch group (N=24), mothers stand touching statically their leg. Eye-tracking measures of infants' disengagement latencies (i.e., saccadic reaction time) indicated that maternal touch increases infants' attention toward fearful faces ( $F= 3.06$ ;  $p=.040$ ) compared to other emotions. By signaling safety, maternal touch increases infants' attention to fearful faces, promoting a longer exploration of the negative emotional stimulus. Ongoing analyses are exploring the association between infants' attentional behavior and the quality of maternal sensitivity, as long as the characteristics of mother-infant touching interactions.

## PREFERENCE FOR SOCIAL AND GEOMETRIC PATTERNS IN DEAF CHILDREN

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Autism spectrum disorders (ASD) is diagnosed in approximately 1 in 100 children and can occur with or without intellectual disability. Although no community prevalence studies of ASD in deaf children or hard hearing (D/HH) has been performed, some studies suggest that about 4 of 100 D/HH children have an additional ASD diagnosis. Comorbidity, along with confounding similar characteristics and the inadequacy of subjective screening tools, makes the diagnosis of ASD in the D/HH population difficult, having in result mis- or late diagnosis and inadequate rehabilitation. Eye gaze investigation has been proposed as an objective screening tool for ASD in the hearing population. This study aimed to investigate D/HH children's gaze patterns, compared as with typical and ASD children. Children were presented with a 1-minute movie depicting moving geometric patterns paired with social scenes, with children in high action, such as dancing. Preferential looking with total fixation duration was measured using a computer-based eye-tracking algorithm. Children with ASD spent significantly more time watching geometric patterns compared to the other two groups. An earlier and more objective diagnosis of ASD in D/HH children would improve therapies and quality in this population.

## TO LIE OR NOT TO LIE? THIS IS A QUESTION OF LANGUAGE CONTEXT

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Research showed that people produced less false statements in a foreign language. However, this does not reflect people's attitudes regarding lying in realistic social interactions, as lies can be either black or white. This research aims to examine the acceptability and intention of lying by manipulating lie type (white/black) and language context (native language/foreign language). In Study 1, eighty-five participants judged the acceptability of six scenarios each of black and white lies in either their native-language (Italian) or their foreign language (English). The results showed an interaction between the two factors: white lies were more acceptable than black lies, and this difference was attenuated in the foreign language context (vs. native language context). In Study 2, eighty-three participants indicated the intention to tell a lie in the same scenarios. The results showed higher intention of lie-telling in white scenarios than in black scenarios, and a marginal attenuation of their difference in the foreign language context. Overall, these results suggest that a foreign-language context reduces the activation of social norms in impersonal lies (acceptability), but this effect was reduced in personal situations (intention).



## USING THE GRIFFITHS MENTAL DEVELOPMENT SCALES TO EVALUATE A DEVELOPMENTAL PROFILE OF CHILDREN WITH AUTISM SPECTRUM DISORDER AND THEIR SYMPTOMATOLOGIC SEVERITY

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Early diagnosis is crucial for Autism spectrum disorder (ASD) and is achieved through a screening of developmental indicators to recognize children who are at risk of autism. One of the most widely used instruments in clinical practice for assessing child development is the Griffiths Mental Development Scale (GMDS). We sought (a) to assess longitudinally whether children diagnosed with ASD, with a mean age of 33.50 months (SD = 7.69 months), show a worsening of abilities measured by the GMDS over time and (b) to analyse which skills or scales of the GMDS could affect the symptomatologic severity typical of ASD. Our results showed a worsening from first (T0) to second assessment (T1), 12 months later, of the General Quotient and all sub-quotients measured by the GMDS, with the exception of the Performance sub-quotient. Three sub-quotients (Personal-Social, Hearing and Language and Practical Reasoning) also affect symptom severity at the time when the diagnosis of ASD is made.

## OLFACTORY DETECTION IN AMNESTIC AND NON-AMNESTIC MCI IS ASSOCIATED WITH EXECUTIVE FUNCTIONS

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Mild cognitive impairment (MCI) is as a transition phase between normal aging and dementia. The aim of this study was to investigate if Amnesic MCI (AMCI) and Non Amnesic MCI (NAMCI) showed olfactory impairment and if this impairment could be related with neuropsychological domains. 19 AMCI and 18 NAMCI (mean age  $68,4 \pm 11,4$ ) were assessed through the Mini-Mental State Examination, the Rey Auditory Verbal Learning Test (RAVLT), the Digit Span (DS), Corsi Block Tapping Test (CBTT), Trail Making Test (TMT), Raven Coloured Progressive Matrices (CPM47), Visual Search, Babcock Story Recall Test, Rey-Osterrieth Complex Figure Test, Phonemic and Semantic Fluency, Frontal Assessment Battery (FAB) and the Sniffin' Sticks Test. Main results highlighted that the olfactory detection was sensitive to the scores obtained on the MMSE, in RAVLT and in FAB. There was a significant correlation between MMSE, RAVLT, Rey figure, Visual Search, Semantic Fluency. RAVLT allows to distinguish between AMCI and NAMCI. AMCI participants showed lower scores both in the MMSE, in the olfactory detection, in FAB, DS and RAVLT.

## EXPLORING THE ROLE OF FOREIGN ACCENT SPEECH ON CREDIBILITY

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Sentences said in a foreign accent are considered less credible than those produced with a native accent. At the same time, the repetition of a statement makes it sound more truthful (i.e., the Illusory truth effect). In this project, we investigate the interaction between these two phenomena by exploring whether the magnitude of the illusory truth effect depends on whether the statements are produced by Italian native speakers or Italian foreign accent speakers. Two groups of speakers were selected to utter the statements: 10 native Italian speakers (Exp. 1- native) and 10 foreign Italian speakers (Exp. 2- foreign). 60 Italian native speakers (30 per experiment) listened 40 unknown sentences. After some minutes, the same pool of sentences (Old condition) were presented together with a new set of 40 sentences (New condition). In this second phase, participants assessed the truthfulness of the statements on a scale of 1 (not-truthful) to 6 (very-truthful). Finally, participants were asked to evaluate the intelligibility and accent of speakers on a six point Likert scale. Result showed higher truthfulness rates for Old compared to New sentences, for both experiments. In addition, judgment on accent modulate the illusory truth effect, only for the foreign experiment.

## SUBCORTICAL STRUCTURES CAN SUBSERVE COMPLEX PERCEPTUAL TASKS

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Subcortical structures such as amygdala and superior colliculus have been suggested to be functionally implicated in face perception, especially under monocular viewing conditions. However, the specific contribution of such subcortical areas is still a matter of debate. A group of hemianopic patients and control participants performed the experimental task using a Wheatstone stereoscope. A same/different judgment task was administered following the presentation of two consecutive images (faces or cars) in the left or right hemifield and presented to the same or different eye. Importantly, one of the two stimuli appeared within the blind portion of patients' visual field, while the other was presented in the corresponding position in their healthy visual field. The behavioral performance resulted to be enhanced when cars or faces were presented to the same eye, for healthy participants but also hemianopic patients. This seems to confirm an involvement of subcortical regions in visual processing - also in the absence of perceptual awareness - going beyond the established idea of an exclusive contribution of cortical networks.

## IMPLICIT APPROACH-AVOIDANCE TENDENCIES TOWARDS FOOD ARE INFLUENCED BY BODY WEIGHT STATUS: A STUDY CONDUCTED WITH A NOVEL MOBILE APPROACH-AVOIDANCE TASK

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Implicit approach-avoidance tendencies toward food stimuli may be involved in the maintenance of unhealthy dietary habits and in the development of eating disorders. Classically, approach-avoidance tasks (AAT) are performed on computers screen and stimuli are only virtually approached or avoided by means of joystick movements. In this study we assessed approach-avoidance tendencies toward food in a group of 215 individuals using a novel mobile version of the AAT, in which participants are asked to move their phone towards their face or away in response to image content (food vs neutral objects). Using this more naturalistic approach, we observed a significant approach bias toward both high-calorie and low-calorie foods in the general population, and we observed that this bias was influenced by participants' BMI. In particular, while in underweight participants the approach bias was stronger for low calorie than for high calorie foods, overweight participants were slower in avoiding high calorie foods than other categories of stimuli. This difference between under and overweight participants observed in AAT reaction times is congruent with the differences one can observe at the behavioral level, thus suggesting a connection between AAT scores and actual food consumption.

## DIFFERENCES AND SIMILARITIES IN THE PERCEPTION OF TIME, LENGTH, AND QUANTITIES IN IN PARKINSON'S' PATIENTS AND HEALTHY OLDER ADULTS

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The similarities in the estimation of time, length and numbers lead to the suggestion that humans possess a common system for processing all quantities. Nevertheless, in the last years a growing body of evidence suggests that we may be born with a common system for quantity processing that, over the course of development, separates into different systems (Newcomb, 2014). To test the possible change on the representation of time, space and length we performed two studies: Study 1 includes 25 healthy young (mean age 22.80 years old) and 26 older adults (mean age 68.65 years old) and Study 2 includes a group of 30 healthy older adults (mean age 66.53 years old) and a group of 30 patients with Parkinson's disease (mean age 66.33 years old). All participants performed three bisection tasks in which they had to judge whether durations, lengths, and quantities were similar to two standards previously memorized. Results showed lower temporal performance in older adults compared to younger counterparts (study 1) and similarly, PD patients showed lower temporal abilities compared to older adults (study 2) indicating a dissociation between the three modalities supporting the idea that partly independent systems underlie the processing of duration, numerosity, and length.

## GENDER DIFFERENCES IN SPATIAL NAVIGATION: EXAMINING THE TYPE OF TASK, MOTIVATIONAL AND PSYCHOSOCIAL FACTORS

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Gender differences have been reported in spatial navigation ability and typically a men's advantage exists for tasks that require survey knowledge. Among individual characteristics related to spatial navigation, motivational factors, growth mindset, and gender stereotype can influence spatial navigation. To date, how such individual factors could explain gender differences in spatial performance at different level of difficulty, remains unclear. The present study investigates gender difference in spatial self-efficacy, growth mindset, and gender stereotype and how these factors interact in influencing spatial navigation in virtual environment. A total of 150 adults answered questionnaires on spatial self-efficacy, growth mindset and gender stereotype, then, learned a route in a virtual environment and performed five spatial navigation tasks. Results showed that women refer lower spatial self-efficacy and endorse lower growth mindset in navigation skills than men. Moreover, spatial self-efficacy predicts better performance in a more difficult navigation task. These findings highlight a role for motivational factors in supporting spatial navigation and suggest that spatial self-efficacy and growth mindset could contribute to explain gender differences in spatial navigation.

## THE LEADER'S EMOTIONAL INTELLIGENCE DOES MODULATE THE RELATIONSHIP BETWEEN THE SUBORDINATE'S EMOTIONAL REGULATION, WORKPLACE BULLYING AND WELL-BEING? A MULTILEVEL ANALYSIS

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The current study aims to test the idea that a worker's reported state of health is related to the adoption of efficient emotion regulation strategies and to the emotional context of an organization in terms of exposition to workplace bullying. We propose that the leader's Emotional Intelligence (EI) abilities act to modulate these relationships. We adopt a multilevel analysis model on data from workers (level 1) and leaders (level 2), collected from an Italian communication company. Results support the role of the leader's EI abilities of using and managing emotions in modulating the association between the workers' experience of bullying and their general state of health. Furthermore, the leader's EI abilities of perceiving and managing emotions appear to play a role in the relationship between the workers' capacity of emotion regulation and their general state of health. Jointly considered, our findings sustain a multilevel understanding of the effects of leaders' EI on workers' well-being and their ability to regulate emotions.



## FOVEAL RETINOTOPIC CORTEX IN PERIPHERAL NON-SHAPE DISCRIMINATION TASKS: COMPARING MAGNO AND PARVOCELLULAR SYSTEM

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According to the foveal feedback (FF) hypothesis, shape information presented in the visual periphery could be processed by the foveal cortex (Williams et al., 2008). In their study, Fan et al. (2016) reported an impairment in performance when a foveal distractor was presented between 150-300 ms after target onset. Using the same procedure as Fan et al. (2016) we tested if FF is specific to the parvocellular system and to tasks that require shape discrimination. Participants had to report which one of two peripherally presented gabors had the higher contrast by pressing a key. A mask was presented foveally at different SOAs (0, 50, 150, 250, 350 and 450 ms plus a no-mask baseline condition). Manipulating spatial and temporal frequency as well as contrast, we created two conditions in which the stimuli activated mainly the magno or the parvo system. Results are in line with our hypothesis: the non-linearity of the best model for SOA showed the presence of a dip specific to the parvo condition. The magno condition was affected by the mask but performance was linearly related to SOA. Our results suggest that FF may occur not only for difficult shape discrimination tasks, but for most tasks as long as they engage the parvo system.

## SPATIOTEMPORAL DYNAMICS OF ATTENTIONAL PROCESSES REVEALED BY FAST OPTICAL IMAGING

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Visuo-spatial attention has been proposed to be mediated by two cortical networks: a dorsal bilateral network thought to control top-down allocation of attention and a right ventral network, thought to be involved in reorienting towards unattended but relevant visual stimuli. This study aims at describing the spatiotemporal dynamics of attentional cueing and exploring the predictive interactions between and within the two networks by using the event-related optical signal (EROS) combined with Granger Causality. 26 right-handed adults performed a cued detection task in a Posner paradigm. Brain activity was recorded by means of a frequency-domain method. Bilateral occipital, parietal and right temporal areas were encompassed by EROS montages. Only phase delay data were considered for functional analysis. Valid trials revealed significantly faster reaction times compared to invalid trials. Functional results showed bilateral dorso-parietal and visual engagement during both orienting and reorienting, along with predictive interactions between these regions. Conversely, the ventral network seems to be involved in predictive interactions in the reorienting process only, later in time, achieving a more post-perceptual role in this type of attentional processes.

## FACE EMOTION IMAGERY TEST (FEIT): VALIDATION STUDY ON A TOOL FOR ASSESSING EMOTIONAL IMAGERY

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Emotional processing and regulation are influenced greatly by our imaginative abilities. These abilities influence the development of emotional awareness and serve as a protective factor for the onset of psychopathological disorders. This study aims to validate the Face Emotion Imagery Test (FEIT), a specific instrument for the analysis of imaginative processes related to emotions. The FEIT contains 24 items that assess imaginative abilities related to facial characteristics, primary emotions, and secondary emotions. The FEIT and the Toronto Alexithymia Scale (TAS-20) were administered to a wide sample of healthy individuals ( $N = 865$ ; age =  $26.2 \pm 9.7$ ). Exploratory and confirmatory analyses were used to investigate the factorial structure of the FEIT. We found no influence of gender or age on the FEIT's ability to assess emotional imagination. Additionally, correlation analysis with the TAS-20 suggest that the FEIT successfully detect the emotional dimension of imagination. These results, along with the outcomes of the criterion validity tests, suggest that the FEIT is an effective tool for assessing imagery skills with emotional stimuli.

## SPORT AND PSYCHOLOGICAL WELLBEING: THE EFFECTS OF PHYSICAL EXERCISE ON COGNITION, EMOTION AND INTERCEPTIVE AWARENESS

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Physical exercise plays an important role in cognitive functioning and psychological well-being by enhancing brain plasticity. Several studies have shown that prolonged exercise training improves memory skills, attentional processes, and emotional regulation. Yet, the literature lacks a detailed examination of the effects of physical exercise on different cognitive domains, emotional awareness, and interoception. Sixty students (mean age = 23.5 SD = 2.4), divided into sportive and sedentary, were tested with a battery of neuropsychological tests to assess their graphic and verbal fluency skills, emotional awareness and interoceptive awareness. Sportives showed an overall better performance, compared to sedentary students. They produced more words, they better applied strategies for drawing, and they were more emotionally and interoceptively aware. These findings suggest that sport can improve certain cognitive processes, and plays a key role in developing emotional and interoceptive awareness skills.

## DON'T LET YOUR FRIENDS MAKE BARPLOTS

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Graphical representation of data and research results is crucial. A good graph provides suitable information on the data structure and data analysis, and constitutes a transparent and effective way for sharing data and research findings. Unfortunately, in the psychological literature, despite numerous explicit recommendations, less than ideal representations continue to be used. In particular, representing mean values using barplots is still very common. This type of graph, which is only suitable for representing frequencies, is too synthetic and does not capture several important characteristics of data and results (e.g., variability, asymmetry, outliers, influential cases, and so on). In this talk we propose alternative - well known - graphical representations that allow, among other things, a more complete and transparent sharing of research findings.

## A COMPARISON OF EQUIVALENT NOISE METHODS IN INVESTIGATING MOTION INTEGRATION

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The limiting factors in global motion perception are internal noise, which indexes local direction detection, and sampling efficiency, which relates to the representation of global direction. These parameters are quantified using the equivalent noise (EN) paradigm, in which the direction of individual elements distributes according to a Gaussian distribution around a given mean. We investigated whether two distinct EN methods, range-based multisampling and a simplified two-point version, reveal comparable parameter estimates for global motion. The multiple-point EN method employed eight staircases manipulating the mean direction to track minimum discriminable angle at a given external noise level. The simplified method employed two staircases, one changing the mean direction to track minimum discriminable offset in the absence of external noise, and another manipulating the standard deviation to track maximum tolerable noise level at a fixed mean direction. The results suggest substantial compatibility between estimates over a wide range of external noise levels sampled with eight data points, and a simplified version producing two highly informative data points. Our findings highlight a practical use of the simplified algorithm to estimate parameters of motion integration.

## THE EFFECT OF COGNITIVE RESERVE ON PERSONALITY TRAITS

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This study aimed to evaluate the relationship between cognitive reserve (CR) and personality traits in young individuals. Forty-three university students underwent the MMPI-2 RF, the CR questionnaire, and the neuropsychological assessment. Two measures of cognitive reserve were computed: a static index (sCR) and the global enrichment index (GE-I). Correlations have been tested and ANOVA models were used to compare subjects with low/high sCR and GE-I level. Dimension of Externalization correlated with low scores on the verbal episodic memory test. The sCR index was negatively correlated with dimension of Internalization. The GE-I correlated with anxiety and isolation. Hobbies were correlated negatively with anxiety and positively with behavioural activation. Individuals with low sCR showed high level of Internalization. Low-GE-I group compared with High-GE-I group showed high anxiety, stress. Individuals with Low-GE-I showed a reduction in recreational activities and increased Internalizing dysfunctional dimensions. When considering the different components of GE-I, leisure cognitive and social activities strongly impacted on personality traits mainly in the Internalization domain. The two measures of CR have been shown to impact differently on specific dimensions of personality.

## THE REPRESENTATION OF PERCEPTUAL SALIENCY OF TASK-RELEVANT OBJECTS IN THE LATERAL OCCIPITAL CORTEX AND THE FUSIFORM GYRUS

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The lateral occipital complex (LOC) and the fusiform gyrus (FG) are two key regions involved in object representation. However, it is unexplored whether these regions also process low-level sensory features, such as object-related perceptual saliency. We used multivoxel pattern analysis (MVPA) to investigate whether a neural signature of perceptual saliency is detectable into LOC and FG. Two categories of objects (chairs or plants) were embedded in everyday-life scenes and located either at the point of maximal or minimal saliency. During fMRI, participants were presented with sequences of scenes and asked to perform a 1-back task to assure attention to the target category object. Standard fMRI analyses showed increased activation in occipital/parietal regions including LOC/FG for targets at minimal saliency, indicating increased task difficulty. Nevertheless, MVPA revealed that only target category (but not perceptual saliency) was decodable in the LOC/FG. However, when saliency was separately decoded for each category, we found a neural signature of saliency in the LOC/FG for plant category only. This supports for the first time a LOC/FG specialization in representing perceptual saliency, although further investigation is needed to clarify why this effect is category-specific.



## THE TIMING OF PARAFOVEAL SEMANTIC PROCESSING

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In this study we adopted the Rapid Parallel Visual Presentation Paradigm consisting in the simultaneous presentation of couple of words, one in fovea (W1) and one in parafovea (W2) in order to study the timing of the parafoveal semantic processing. In three experiments, we manipulated written word frequency, semantic relatedness between the two words and the effect of stimulus time presentation (150 ms, 100 ms, 50 ms). Accuracy on W2 was higher when W1 and W2 were both of high-frequency and when they were semantically related. In terms of W1's reading times, these were faster when both words were highly-frequent but only in the semantic relation condition (150 ms); when W2 was highly frequent and semantically related to the foveal word (100 ms). When the stimuli were presented for 50 ms, the reading times were reduced when W1 was highly frequent and, crucially, in the semantic relation condition. Our results suggest that it is possible to extract semantic information from the parafovea very fast (within 100 ms) and in parallel to the processing of the foveal word, especially when the cognitive load required for the latter is reduced, as in the case of high-frequency words. The results are discussed in terms of word recognition and eye movements' models.

## EVIDENCE FOR INDEPENDENT SPATIAL REPRESENTATIONS OF SYMBOLIC AND NON-SYMBOLIC NUMERALS

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Several studies show that numerals, both in symbolic (digits) and non-symbolic (dots) format, are represented spatially, with small numbers eliciting faster left key responses and large numbers eliciting faster right key responses (SNARC effect). A format independent SNARC has been used to support the existence of a common system for symbolic and non-symbolic numerical representations. The present study aims at investigating whether symbolic and non-symbolic numerals interact in the SNARC when both information is presented simultaneously. Dice-like patterns, with digits being displayed instead of dots, were presented to participants. In two separate conditions, participants had to respond either to the number of digits being present on the screen or to their numerical size. In the non-symbolic task, they had to judge whether the digits on the screen were more or less than three, irrespective of the numerical value of the digits. In the symbolic task, participants had to judge whether the digits on the screen were numerically smaller or larger than three, irrespective of the number of digits being present. The results suggest that congruency between symbolic and non-symbolic numerals did not modulate the response patterns, thus supporting the idea of independent representations.

## VISUO-SPATIAL ATTENTION TREATMENTS IN CHILDREN WITH DEVELOPMENTAL DYSLEXIA: A META-ANALYSIS ON ACTION VIDEO GAMES TRAINING

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Dyslexia is a multifactorial neurodevelopmental disorder characterised by phonological and orthographic deficits. However, several studies have shown impairment in visuo-spatial attention in pre-literacy, beginner and advanced readers with dyslexia, as well as universal attentional network dysfunction in people with dyslexia. Thus, dysfunction of selective attention could be one critical distal contributor to this disorder. Is visuo-spatial attention treatment effective in reducing reading difficulties in children with dyslexia? This meta-analysis aimed to investigate the effectiveness of visuo-spatial attention treatments with action video games (AVG). Nine randomised controlled trials involving 222 children with dyslexia were selected. The impacts of this training not only affect visual attention ( $g=0.72$ , the primary outcome) but, more importantly, also extend over cognitive functions not directly trained, such as reading speed ( $g=0.44$ ), phonological skills ( $g=0.45$ ) and cross-modal abilities ( $g=0.40$ ). These improvements highlight a clear role of selective attention in reading skills development and the transfer effects of AVG training. The clinical application of AVG enables effective, fun and engaging treatment of dyslexia.

## THE REMOTE STIMULATION FOR COGNITIVE DECLINE (RECODE): A NEW TOOL FOR THE REMOTE TREATMENT OF COGNITIVE DECLINE AND DEMENTIA

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From COVID-19 widespread, health care institutions implemented measures to reduce virus transmission that forcedly disrupted access to routine medical cares. Telemedicine therefore represented a timely response to ensure continuity of such services. This is particularly true for those individuals suffering from chronic conditions as dementia that require constant clinical attention. A new digital tool for the non-pharmacological remote treatment of cognitive decline was developed: the Remote stimulation for COgnitive DEcline (RECODE). It has been introduced to a group of patients and their caregivers to preliminary explore its effectiveness and usability, as well as the psycho-affective correlates and the impact of this shared experience on the patient-caregiver dyad. There was a significant increase in accuracy ( $p=.009$ ) between the performances observed before [Median=0.62; CI=0.50-0.85] and after concluding the training [Median=0.70; CI = 0.47-0.78]. Data from ad hoc questionnaires, although also preliminary and qualitative, suggest that RECODE is an easy-to-use tool and a positive opportunity of closeness for patients and caregivers, increasing these latter self-efficacy without impacting on their perceived care burden.

## UNDERSTANDING THE EXPERIENCE WITH TELE-NEUROPSYCHOLOGY AMONG PROFESSIONALS: AN EXPLORATIVE STUDY

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After COVID-19 restrictions, neuropsychological practice underwent a substantial adaptation in the transition from face-to-face to remote procedures (teleneuropsychology, T-NP), without available gold standards or validated tools. In this context, our study aims to investigate the limitations and difficulties found in the application of T-NP, through an ad-hoc survey developed by the TELA group. The survey is made up of 61 items investigating bureaucratic, methodological and technological/IT difficulties that professionals found in the provision of T-NP services for both assessment and rehabilitation. Answers of 232 participants were analyzed: 68% of respondents had experience with T-NP. Only a few of them reported bureaucratic difficulties and more than 80% had technical issues with the digital devices used. The adoption of T-NP was particularly challenging with very compromised individuals for 40% of respondents. Interestingly, a large part of professionals (75%) experienced difficulties due to the absence of standardized tools and guidelines. The use of T-NPS will plausibly become part and parcel of standard clinical practice. Therefore, the identification of key critical aspects of T-NP may help in the future development of standard guidelines and validated instruments.

## THE EFFECT OF SPEED OF A CRIME-RELATED VIDEO ON RESPONSIBILITY JUDGMENTS

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Speed changes may lead to biases in judging real-life videos. The present study aims to examine how speed affects responsibility judgments concerning a video displaying an assault on a bus. Specifically, this study uses a 5x3 mixed design with video speed (very slow vs slow vs neutral vs fast vs very fast) as a between subjects factor, action conditions (hit vs hurt vs kill) as a within subjects factor, and different dimensions of action responsibility (i.e., agency, predictability, criminal intent, severity) as dependent variables. Results from a 300 subjects sample (60 for each video speed condition) show that participants in the very fast condition score lower on agency for the kill action than those in the slower conditions. Regarding predictability, participants score higher for the hit action than in the harm and kill conditions. In addition, participants in the very fast condition give the highest ratings for the hit action in terms of criminal intent; by contrast, participants in the very slow condition give the highest ratings for the harm action. Finally, participants in the slower conditions gave higher severity ratings than those in the very fast condition. These considerations raise serious concerns about the use of videotapes as evidence in criminal proceedings.

## SOCIOCULTURAL INFLUENCES AND OBJECT PERCEPTION: A COMPARATIVE STUDY BETWEEN ITALIAN, DUTCH, AND CROATIAN POPULATION

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Factors such as age, sociocultural, anthropological and linguistic dynamics can influence the perception of objects. For instance, an object that is common in one population may be unusual in others (e.g., Sirois et al., 2006). For this reason, a close control of all experimental conditions during stimuli selection is crucial for researchers. Over the years, many norms have been collected for databases of familiar stimuli (e.g., Kremin et al., 2003). This study presents a cross-cultural correlation for a set of stimuli that also includes non-familiar objects (FANS Database). Specifically, data on the level of familiarity, naming, function, type of use (whether personal or observed) and frequency of use of thirty objects were collected for Dutch and Croatian populations (from childhood to adulthood) through an online questionnaire. Data were then correlated with the Italian sample of the FANS Database. Results showed that, regardless of age, differences are particularly evident on frequency of personal and observed use, which is particularly high in the Italian sample. This effect suggests that sociocultural factors have an important role in the knowledge of objects; furthermore, these data make the FANS Database a suitable tool also for Dutch and Croatian populations.

## WHICH ARE THE PSYCHOLOGICAL PREDICTORS OF STOCK MARKET PARTICIPATION?

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Classical economic theories describe investors as rational individuals who base their decisions solely on expected returns and profit maximization. Behavioral sciences, however, have largely demonstrated that psychological, emotional, and motivational factors influence financial decision-making. In this framework, our study, held in partnership with the Italian fintech Flowe, aimed to find the psychological predictors of stock market participation. Analysing survey data on a sample of 1153 individuals (M=577, F=576; age range 18-50), we measured the impact of socio-demographic characters, financial literacy, financial self-efficacy, impulsivity, risk attitude and future orientation on the decision to invest. Findings from a Logistic Regression Model (Nagelkerke's  $R^2=.28$ ;  $\chi^2(8)=268.36$ ,  $p<.001$ ) show that financial risk propensity and financial literacy – objective and perceived – significantly affect the probability of participating in the stock market. In addition, we observed a consistent role in investment related to gender gap and education level. These results suggest that financial decision-making processes are not merely guided by the pursuit of profit. Considering psychological factors (risk attitude, motivations, and values) is essential to understand investment decisions.



## THE ETUDE PROJECT: A EUROPEAN ONLINE SURVEY TO ASSESS FACTORS ON SYMPTOM PERSISTENCE OF PATIENTS WITH FUNCTIONAL DISORDERS

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Functional disorders are a heterogeneous group of somatic complaints defined by the DSM-5 and ICD-11 as excessive thoughts or behaviors that occur disproportionately, and are accompanied by anxiety and worries. In the framework of a Marie Skłodowska-Curie funded European research program (“Encompassing Training in functional Disorders across Europe”, ETUDE, Grant Agreement n. 956673), literature was systematically reviewed and meta-analyzed to identify the prevalence of functional disorders as a basis to identify factors of symptom persistence as the main focus of this study. Methods: In a pan-European cross-sectional online study which will be distributed in Germany, the Netherlands, Poland and Italy health care and treatment related factors will be assessed which contribute to symptom persistence in adults using validated questionnaires (PHQ-15, SSD-12, SCQ-D, HCU-Q and the SF-12). Results: Results of the systematic review and meta-analyzes will be presented as well as first analysis of the pan-European study. Discussion: This study aims to spread knowledge on functional disorders between health care providers and to gain attention for the European research activities, furthermore the results of the pan-European study will provide implications for treatment guidelines.

## HEART RATE VARIABILITY AND EATING DISORDERS: THE CLINICAL AND AUTONOMIC SIGNATURE OF MINDFULNESS-BASED INTERVENTIONS

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Eating Disorders (ED) represent different diagnostic entities sharing a persistent disorder of food intake, that alters health and psychosocial aspects, leading to high burden of disease. Recent studies showed that resting state vagally-mediated Heart Rate Variability (HRV) is elevated in ED patients, proposing it as potential biomarker of impaired stress response, even if the available literature is uncertain. The Mindfulness-based interventions (MBI's) may restore the autonomic balance and enhance the ability to cope with stressors. This study aims at evaluating the autonomic and clinical correlates of two audio recorded MBI's (i.e. loving kindness and self-contact) in twenty ED patients, compared to controls. The autonomic evaluation included the recording of heart and breathing rates before, during and after the audio listening. The clinical assessment entailed self-administered psychological measures for emotional style, depression, anxiety, dissociation and traumatic events. A brief experience assessment and the vagal maneuver have been implemented at the end of the intervention. MBI's may represent a promising tool to regulate the autonomic activity in ED patients. HRV may be proposed as biomarker of disease presence and remission, in response to MBI's.

## PAST EXPERIENCE MODULATES ATTENTIONAL ORIENTING WITH SYMBOLIC CUES

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Recent findings from visual search studies show that the implicit learning of spatial regularities (Statistical Learning, SL) can modulate attention (Jiang, 2018). We investigated effects of SL in a Posner cueing task with symbolic cues (i.e., arrow and social cues). Differently from previous studies, we used a three-phase design (e.g., Baseline, Learning, Testing; Jiang, 2018), allowing to isolate pure effects of SL, and excluding intervening factors (e.g., inter-trial priming). In two experiments with arrow and gaze cues, cue predictive validity changed from 50% during the Baseline to 75% probability to predict target location (left or right) during Learning. Findings showed larger cueing effects to the biased location in the Learning phase (i.e., when cue-target contingencies were present) compared to the Baseline phase (i.e., when cue-target contingencies were absent). Importantly, these effects persisted during the final Testing phase, when cue predictive validity returned to 50%, providing evidence that SL modulated attentional orienting with arrow and gaze cues.

## DIFFERENT MEASURES OF VERBAL EPISODIC MEMORY FOR THE CLINICAL CHARACTERIZATION OF PATIENTS WITH MILD COGNITIVE IMPAIRMENT: PREDICTIVE VALUE ON ALZHEIMER'S DISEASE PATHOPHYSIOLOGY

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We wanted to investigate different measures of Rey Auditory Verbal Learning Test (RAVLT) and Logical Memory (LM) in predicting underlying Alzheimer's disease (AD) in 106 MCI patients. Patients were classified as MCI-AD (n. 62) and non-AD (n. 44) on the basis of CSF profile, according to A/T/(N) classification scheme. We calculated correlations among memory scores and diagnosis. WALD and STEP-WISE regression model were used to find the combination of measures showing the better predictive value on AD profile. MCI-AD patients showed worse scores on Mini Mental State Examination (MMSE), RAVLT and LM ( $p < 0.05$ ). MMSE, RAVLT-immediate recall (RAVLT-imm) and RAVLT-delayed recall (RAVLT-del) reported the stronger association with CSF biomarkers. The accuracy of predicting AD diagnosis was improved by combining RAVLT-imm, RAVLT-del, RAVLT-false recognition and LM (AUC=0.768). RAVLT-del was the only measure able to discriminate MCI-AD vs. non-AD ( $p < 0.01$ ). Our study supported the importance of different episodic memory measures for better identification of MCI in clinical practice. RAVLT-del resulted the more accurate measure for discriminating MCI-AD from non-AD. However, a combination of 4 memory measures of RAVLT and LM reached the higher diagnostic accuracy.

## HOW RISKY IS THE USE OF LOOT BOXES? AN ITEM RESPONSE THEORY (IRT) ANALYSIS OF THE RISKY LOOT BOX INDEX (RLI) WITH ITALIAN ADOLESCENTS

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Loot Boxes (LBs), i.e., virtual items embedded within videogames with numerous features reminiscent of gambling, are increasingly widespread among male and female adolescents. However, there is a lack of instruments to assess their problematic use. An instrument recently developed for adults is the Risk Loot Box Index (RLI; Brooks & Clark, 2019), a unidimensional scale that measures the risk associated with the use of LBs. In order to have a suitable measure to be used with adolescents, we aimed at investigating the psychometric properties of the RLI with youth by applying Item Response Theory (IRT). We were also interested in analyzing if the scale was invariant across genders. Participants were 1614 Italian adolescents (75% males,  $M_{age}=16.50, SD=1.26$ ). Analyses confirmed the unidimensionality of the scale and the good adaptation of the model to data ( $RMSEA=.04$ ). All the items had adequate discriminative capacity. The RLI was sufficiently informative and appropriate for the evaluation of medium-high levels of the trait. Differential item functioning (DIF) across genders showed that the items were invariant across genders. Validity was assessed by considering the relationship with problem gaming. The RLI is adequate to assess risky use of LBs among male and female adolescents.

## PROBING IMPLICIT AND EXPLICIT CORRELATES OF COVID-19- THEMED ADVERTISING: EVIDENCE FROM BEHAVIORAL AND EEG DATA

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A great deal of attention was recently paid to neuroscientific methods which offer more objective measures of consumer implicit processes and overcome explicit measures limitations. However, there is still a long way to understand how distinct implicit processes interplay in consumer decision. The present study sought to look at implicit behavioral and neurovascular responses to emotionally arousing brand advertising, which employed COVID-19 contents. Participants were to observe, in two distinct sessions and two distinct orders of administration, COVID-19 related or unrelated brand commercials while hemodynamic variations were recorded from the prefrontal cortex (PFC), considered a neurophysiological marker for emotional processing. Then, the IAT was administered to investigate the implicit attitude toward the brand. Increased activity within the PFC suggests that pandemic content may be effective in generating emotional engagement and increasing attention when initially presented, which is consistent with higher IAT scores, indicating more favourable implicit attitudes. However, as opposite results are revealed when the COVID-19 content follows neutral advertisements, the effectiveness of COVID-19 related messages may be constrained by the advertisement order of administration.

## ENVISIONING THE FUTURE: AN ALE META-ANALYSIS OF FUNCTIONAL NEUROIMAGING STUDIES

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Our representations of the future are processed in the service of several different cognitive processes including prospective memory, temporal discounting and episodic future thinking. These functions encompass distinct cognitive operations and neural substrates, but they may also share common neural mechanisms since they all operate on the elaboration of time material, particularly future-related. The goal of the present meta-analysis is to understand whether there is a core network underneath future-oriented cognition, using the Activation Likelihood Estimation (ALE) method. Following the PRISMA guidelines, a total of 30, 20 and 26 neuroimaging studies were included for future thinking, prospective memory and temporal discounting, respectively. Results reveal different patterns of brain activation depending on the cognitive function involved. The conjunction analysis of the three explored domains showed no significant overlap, suggesting that future-related cognitive processes do not share a specific network, but they are function-dependent.

## EXPLORING THE RELATIONSHIP BETWEEN SENSORY HABITUATION, AUTISTIC TRAITS AND ATTENTIONAL CONTROL

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People with autistic spectrum disorder (ASD) exhibit deficits in processing sensory information in daily life. Specifically, they show difficulty in detecting, modulating, interpreting or responding to sensory inputs, which determine profiles of hyper- or hypo-sensitivity. Also, they show a typical attentional bias toward processing local details of stimuli at the expense of global features. We hypothesized that altered habituation processes could contribute to sensory profile and attentional biases. To this end, we performed a study on people recruited from an adult general population, with no diagnosis of ASD or other developmental or acquired disorders. We measured their autistic traits by the Autistic Spectrum Quotient questionnaire and their sensory profile by the Sensory Perception Questionnaire. Habituation was assessed by a new validated questionnaire, the Sensory Habituation Questionnaire, and participants were asked to perform a Navon task. The results confirmed previous literature, showing that higher autistic traits correlated with hyper-sensitivity profiles. In addition, they revealed that higher resistance toward habituation was associated with higher autistic traits and poorer processing of global relative to local features of stimuli.



## EFFICACY OF NON-PHARMACOLOGICAL INTERVENTIONS TARGETING SLEEP QUALITY IN OLDER ADULTS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Older adults often report sleeping difficulty, which can affect their cognitive and everyday functioning and, above all, quality of life. Several non-pharmacological interventions (NPIs) have been proposed to improve sleep quality in older adults without sleep disorders and dementia. With the present systematic review and meta-analysis, we examined the benefits of NPI in older adults' sleep quality. Studies on NPIs targeting older adults' sleep were searched in three key databases (PsycInfo, PubMed, Scopus). The data extracted were meta-analyzed using random effects models for each type of NPIs. Out of 1893 articles, 31 studies were included in our review (N= 2224 older adults; age ranges= 60-78 years). All NPIs showed improvements in self-reported sleep quality (Physical activity:  $d=.48$ ; Sensory stimulation:  $d=.97$ ; Psychological/psychoeducational or combined interventions: range  $d: .21-.97$ ). NPIs based on physical activity reported improvements in objectively-measured sleep quality ( $d=.31$ ). The most widely used NPIs were those based on physical activity and sensory stimulation, showing promising results on sleep quality. More evidence is needed for psychological/psychoeducational interventions and combined programs to test their effectiveness.

## USABILITY STUDY OF A WEB-BASED COGNITIVE TRAINING PROGRAM TO ENHANCE PROBLEM-SOLVING IN HEALTHY OLDER PEOPLE

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The development of web-based cognitive enhancement programs is becoming a priority for reducing the impact of ageing on quality of life. To be most effective, these tools should have high ecological validity and should be easily accessible, adaptive, and customizable. Exercises with a high ecological validity are exercises that train participants on typical tasks required in everyday life, thus enabling a positive impact on the participants' quality of life. A pilot study with a group of healthy older adults tested the usability of the computerized training task "Weekend in Rome". Users have to plan a two-day vacation in Rome (Gaspari et al., 2019). In addition to making train and hotel reservations, a list of activities to be accomplished is given (such as locations to visit, or events to attend). Executing these tasks, users navigate a map where all the challenges which are typical of planning a trip in real life (e.g., reservations, bus schedules, or opening hours) can be mastered. This training will be ecological, engaging, adaptive, incremental. This task is designed to improve participants' problem-solving abilities, but also to boost confidence with technological tools and internet-based activities. \*This study is supported by Velux Stiftung Foundation.

## WOMEN AND POLITICS: ANALYSIS OF GENDER IMPLICIT STEREOTYPE IN POLITICAL PARTICIPATION

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Gender inequality in politics is a worldwide issue and more research is needed to uncover the reasons underlying power differences between men and women covering political roles. The present correlational designed study explored the potential implicit attitudes favouring formal political careers for men and informal political roles for women, which might prevent women from pursuing high ranked political positions. Relations among implicit (IAT scores) and explicit attitudes and individual characteristics (hostile and benevolent sexism, sociopolitical sense of control, self-esteem, and trait/state anxiety) were examined, also evaluating the impact of participants' gender on them. Sixty participants (29 M, 31 F, Mage=39.4; SD=17.2) took an ad-hoc IAT on implicit associations between gender (men vs women) and political roles (institutional vs informal), along with a battery of self-reported scales. A strong association in both women and men between men and institutional representation was revealed. Also, a positive correlation between IAT scores and benevolent (but not hostile) sexism was found. Results will be discussed considering their practical implications and future research directions in this field.

## MEASURING DEPRESSION WITH THE QUESTIONNAIRE BASED IMPLICIT ASSOCIATION TEST: A NEW TOOL TO DETECT MALINGERING

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In the last decades many studies demonstrated that self-report measures are massively prone to malingering. To improve the detection of malingered depressive symptoms, we developed the depression questionnaire-based Implicit Association Test (qIAT). In study 1, a first version of the new tool was made on the basis of several BDI-II items and tested on a sample of 118 participants, 59 of them asked for faking depressive symptoms. The aim was to test psychometric properties (reliability, internal and convergent validity) of the new tool and its better-expected susceptibility to faking, compared with explicit measure. In study 2, we replicated study 1 using a more varied wording version of stimuli to control response biases. Results showed adequate internal consistency (Cronbach's Alpha), for study 1 and 2, along with small/moderate correlations with self-report measures of depression, supporting their convergent validity. Moreover, in the second study the qIAT was significantly correlated with different theoretically linked criteria (i.e., self-esteem, satisfaction with life), supporting criterion validity of the new measure. Finally and most importantly, in both studies, the depression qIAT revealed a considerably lower vulnerability to faking compared to the BDI-II.

## USING NEUROMODULATION TO UNDERSTAND HIGHLY SUPERIOR AUTOBIOGRAPHICAL MEMORY RETRIEVAL: A TMS STUDY

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Highly Superior Autobiographical Memory (HSAM) is a rare ability to recall a profound number of personal events across one's lifespan. HSAM recall is extremely quick, detailed and highly accurate, yet how autobiographical content is retrieved remains misunderstood. Here, we used transcranial magnetic stimulation (TMS) on a single HSAM case to identify specific brain areas causally involved in exceptional retrieval. Participant was shown several dates previously verified they had a memory for (i.e., verifiable event recall) while TMS was administered over visual areas (V1), left dorsolateral prefrontal cortex (DLPFC) or vertex (control) 500 ms after each date onset. Time to access memories in response to a date, nature of the memory (i.e., personal or factual), and ratings of whether access was direct or generative were recorded. Results found left DLPFC TMS significantly slowed down participant reaction time, while V1 stimulation caused a speeding up, with both effects specific to generative memory retrieval. This is the first neuromodulation study on an HSAM subject and provides evidence the left DLPFC is causally involved in HSAM elaboration. V1 effect is discussed in terms of addition-by-subtraction, hypothesising that V1 modulation allows other areas to increase efficiency.

## PERCEIVED RESTORATIVENESS IN RELATION TO INDIVIDUAL AND ENVIRONMENTAL VARIABLES: A STUDY CONDUCTED IN SARDINIA AT POETTO BEACH

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The present study examines how objective, social, and perceived environmental conditions in a blue space are associated with the perception of psychological restorativeness. The research was inspired by a previous study by Hipp and Ogunseitán (2011). We collected data between April 2021 and February 2022 at Poetto Beach (Sardinia). Participants (n=255) completed a survey during their stay at the beach about perceived environmental quality, stress, weather, and restorativeness. We used structural equation modeling to evaluate the association between psychological restorativeness factor(s) and social, environmental, and weather parameters. The nature of the association between temperature and restorativeness was also analyzed, considering this relation both as a linear and as a non-linear, and considering the differences between summer and winter on restorativeness. Results suggest that the environment is experienced as more psychologically restorative especially in winter season, with less cloud cover, and when participants come alone or in a smaller (rather than larger) group. Among perceived factors, air quality has a positive effect. Finally, results from correlation analysis reveals that perceived stress is negatively associated with weekly frequency of visits to the beach.

## DECISION-MAKING IN THE LEGAL DOMAIN: THE NEUROLAW PERSPECTIVE

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This study investigated the neurophysiological correlates underlying the normative judgment of professionals in the legal field and in other professional contexts during the performance of daily work activities with high decision-making impact. A sample of 20 experienced professionals (10 in the legal and 10 in the non-legal field) were asked to fill in a diary of their activities during two different days indicating for each activity the level of intensity perceived in terms of decision-making (from low to high decision-making impact). Meanwhile, their neurophysiological correlates were collected with an electroencephalographic wearable device. Results highlighted a greater activity of delta and theta band in the temporoparietal region during the performance of activities with a high decision-making impact on their jobs. For the legal professionals, compared to others, an increase in theta activity in the temporo-parietal region and alpha in the antero-frontal region was found, suggesting greater involvement of emotional and attentional processes during activities involving moral and normative judgment. This evidence could be considered as the first neurophysiological markers of the decision-making and reasoning process of the legal operators involved in the legal processes.

## RESTING STATE PERIODIC AND APERIODIC NEURAL ACTIVITY IN DEVELOPMENTAL DYSLEXIA

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Few studies addressed endogenous brain rhythms in Developmental Dyslexia (DD) and none of them considered the non-oscillatory (aperiodic) neural activity. Aperiodic measures recently gained growing interest as a valuable component of the power spectrum per se, linked to physiological and cognitive processes in healthy and clinical populations. Here, adult readers with (N=26) and without (N=31) DD were asked to read a brief text, lists of words and lists of pseudowords to assess their reading skills. Resting-state EEG was recorded with closed and open eyes; periodic (amplitude) and aperiodic (offsets and exponents) parameters were calculated. Compared to control, DD subjects showed lower alpha/beta amplitude in the eyes-closed condition and decreased aperiodic offset and exponent in parieto-occipital channels. Periodic and aperiodic measures were interrelated, especially in the DD group, suggesting that differences in alpha/beta amplitude could be partly attributed to differences in the aperiodic activity. Within the DD group, we observed a positive correlation between alpha/beta amplitude and words reading time. Overall, these findings suggest that distinguishing periodic and aperiodic activity offers the possibility of deepening the psychophysiological characterization of DD.



## THE ROLE OF CONTEXT IN REDUCING THE ILLUSORY TRUTH EFFECT

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Perceived credibility of statements increases with repetition. Mainstream explanations assume a key role in this effect of adaptive learning mechanisms which tend to associate processing fluency with truth. However, manipulations that alert participants of the presence of falsehood reduce this effect. We conducted three behavioral studies with a between-subject design to investigate the role of context in modulating the effect of repetition on truth judgments. All the studies had an encoding phase where participants read 60 sentences (30 unknown sentences, 30 filler sentences). After a brief arithmetic distractor task, participants judged the truthfulness of 120 sentences (half repeated, half new) on an even Likert scale (1 “certainly false”-6 “certainly true”). We manipulated the presence of explicit warnings and the type of filler sentences (unknown, true, false). Our results show that warning reduces the illusory truth effect, replicating previous findings. Interestingly, we show that also a context of clearly false filler largely reduces the illusory truth effect, similarly to explicit warnings. Our findings support and extend the role of contextual modulations in truth judgments, suggesting that increased fluency due to repetition is not the only mechanism at play.

## THINKING ABOUT IT: THE IMPACT OF COVID-19 RELATED STIMULI ON PROSPECTIVE MEMORY

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In 2020, our lives changed due to the beginning of the pandemic situation. Since then, information regarding COVID-19 has been a constant presence in the news and in our conversations, catalyzing our attention and worries. Do this continuous exposure to COVID related stimuli have produced aftereffects on our ability to perform everyday activities? To answer this question, we investigate Prospective Memory (PM), the ability to remember to perform something in the future, presenting one of three different videos before the beginning of the PM task. The video had either COVID-related, neutral or negative contents. Data were collected online from 278 participants. Our results showed a detrimental effect of the negative video on performance, reducing the number of correct responses compared to the neutral one. Intriguingly, on the other hand, performance resulted to be enhanced by the exposure to COVID-related stimuli, showing a significantly higher accuracy in this condition, compared to the other twos. Furthermore, accuracy to the PM task showed to correlate with state anxiety (expressed by their responses to the DASS-21, the Depression, Anxiety and Stress Scale), and with the Intrusion and Avoidance subscales of the Post-Traumatic Stress Disorder Related to COVID-19 Questionnaire.

## COMPARING AUTOBIOGRAPHICAL MEMORIES OF JOYFUL AND SAD EVENTS

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Joy and sadness occur fairly frequently in the lives of ordinary people. The present study investigates the similarities and differences between joyful and sad autobiographical memories. We recruited two groups of adult participants matched for age, gender, and education: subjects belonging to the first group (N = 95) were asked to write out a brief narrative of a joyful personal event; subjects belonging to the second group (N = 90) were asked to write out a brief narrative of a sad personal event. All the participants also completed questionnaires assessing the memory characteristics of recalled events, event centrality, and social sharing of emotion. Results showed that narratives of sad events were significantly lengthier than narratives of joyful events. However, autobiographical memories of joyful and sad events were substantially similar with respect to a number of variables, including narrative coherence, phenomenological characteristics (e.g., vividness, quality, emotional intensity), and rate of emotional social sharing. Taken together, results suggest that, although joy and sadness are hedonically opposing emotions, they have a very similar impact on autobiographical memory.

## THE PERCEPTION OF AFFECTIVE TOUCH IN PATIENTS SUFFERING FROM FIBROMYALGIA

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Fibromyalgia (FM) is a syndrome characterized by diffused chronic pain, in absence of inflammatory or structural musculoskeletal abnormalities. It is still unclear whether FM's etiology depends on peripheral factors or aberrant central physiological processes which amplify the perception of pain. Recently, pleasant tactile stimulation has been found to have a soothing effect on pain perception, suggesting a possible relationship between the Affective Touch (AT) system and nociception. The aim of the present study was to assess AT perception in FM patients compared to healthy controls. We hypothesized that the somatic component of FM could affect the hedonic perception of touch. 15 female patients and 15 age and sex-matched healthy controls were recruited and screened for general psychopathology and basic somatosensation. AT was measured via the classic protocol and pleasantness ratings were recorded. We found that affective stimulations were considered as more pleasant than non-affective stimulations in both groups, but FM patients rated tactile stimulations as less pleasant in general. No significant group differences emerged in other basic somatosensory measures. In conclusion, our findings seem to suggest a specific alteration of the affective dimension of touch in FM.



ISBN 978-88-6938-316-8