

**Library &**  
**Information Centre**  
ARISTOTLE UNIVERSITY OF THESSALONIKI

## **Hellenic Journal of Psychology**

Online ISSN: 2732-7027

Journal homepage: <https://ejournals.lib.auth.gr/hjp/>

### **Teachers' mental health during covid-19: An evidence-based program for teachers**

**Poulou, M.S., Grazzani, I., Cavioni, V., Cefai, C. & Camilleri, L.**

To link to this article: <https://doi.org/10.26262/hjp.v21i2.9942>



© 2024 The Author(s).

Published by Psychological Society of Northern Greece

This article is licensed under [CC-BY 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

Hosted and distributed by: Prothiki AUTH scientific publications management, Library & Information Centre, Aristotle University of Thessaloniki

## TEACHERS' MENTAL HEALTH DURING COVID-19: AN EVIDENCE-BASED PROGRAM FOR TEACHERS

*Maria S. Poulou<sup>1</sup>, Ilaria Grazzani<sup>2</sup>, Valeria Cavioni<sup>3</sup>, Carmel Cefai<sup>4</sup>, & Liberato Camilleri<sup>4</sup>*

*<sup>1</sup>University of Patras, Greece*

*<sup>2</sup>University of Milano-Bicocca, Italy*

*<sup>3</sup>University of Mercatorum, Italy*

*<sup>4</sup>University of Malta, Malta*

**Abstract.** While it is acknowledged that teachers' social and emotional competences influence the quality of teacher-student relationships, the role of teachers' own mental health has been often overlooked. A plethora of school-based programs have focused exclusively on teaching students' social and emotional competences, with no emphasis given to the implementors' social and emotional competences. The present study is part of a bigger research project and investigated changes on teachers' social and emotional competences and resilience, following the implementation of Promoting Mental Health at Schools (PROMEHS), a school-based program developed for both students and teachers' promotion of mental health at schools. The program was implemented through teleconference during COVID-19. Participants were 152 in-service primary and secondary education teachers, divided in an experimental and a control group. The Social and Emotional Competence for Teachers (SECTRS) and the Connor Davidson Resilience Scale (DC-RISK, 10) were used to measure teachers' social and emotional competences and resilience. The study revealed moderate changes on teachers' competences following the PROMEHS program.

**Key words:** Mental health promotion, Teachers' social and emotional competences, Resilience

### ***Teachers' social and emotional competences***

Teaching is an emotionally demanding job with relevance to teachers' personal and professional performance (Oliveira et al., 2021). Teachers' emotions are integral to teaching and play a crucial role in students' learning and teacher-student relationships (Lee & Vlack, 2018). Because classrooms are emotional spaces, teachers are at particularly high risk for experiencing high levels of stress and negative emotions (Hargreaves, 2000; Kariou et al., 2021), which can diminish instructional effectiveness, interfere with the ability to implement appropriate classroom management practices, and lower motivation for teaching (Gilmour et al., 2022). Social and Emotional Learning (SEL) has recently been suggested in the literature as a protective factor to stressors of teachers' daily practice, from which teachers can improve their own social and emotional competences and general well-being (Jennings et al., 2017; Schonert-Reichl et al., 2017). Social and emotional learning is the process through which both students and teachers acquire and effectively apply their social and emotional skills, learn to understand and use emotions, set positive goals, establish and maintain positive relationships, and engage in responsible decision making (Collaborative for Academic, Social and Emotional Learning, 2013; Stillman et al., 2018). Through teachers' socialization process students acquire skills for regulating their own emotions, express them appropriately, develop social competence and emotional understanding, and handle situations with others in a positive way (Denham et al., 2012). SEL competences are positively associated with greater work satisfaction and reduced stress and burnout (Jennings & Greenberg, 2009). Research by Jennings and Greenberg (2009) suggests that socially and emotionally competent teachers are better at understanding and managing their own and others' emotions and display stronger relationship-building capability, whereas teachers with poor social and emotional competences have low perceptions of their ability to support students' well-being (Sisask et al., 2014).

Resilience in teachers also serves as a protective factor for teachers' mental health and well-being (Hascher et al., 2021). Resilience is a dynamic state resulting from an interaction between personal and professional factors (Yada et al., 2021; Squires et al., 2022). Emotional competence is one of the personal resources which have been found to explain resilience for teachers (Ngui & Lay 2020; Schneider et al., 2013). Teacher resilience can be understood as teachers' capacity for continuing to bounce back and successfully recovering strengths in the face of challenging conditions (Brunetti, 2006; Wald et al., 2006). Teachers' resilience has been positively linked to teachers' self-efficacy, professional development, job satisfaction and commitment (Beltman et al., 2011; Hascher et al., 2021), and negatively associated to depression and anxiety (Poole et al., 2017; Wells et al., 2001). Resilience was also found to reduce the association between teachers' burnout syndrome and subjective well-being (Hu et al., 2020). Teachers' social and emotional learning and resilience skills are crucial psychological resources for their daily practice, helping them to engage in effective and positive practices, building healthy relationships, and consequently leading to positive mental health outcomes (Mansfield, 2020). Therefore, nurturing teachers' social and emotional competences may be a prerequisite for providing supportive classroom climate. Teachers need to be equipped with social and emotional

competences to teach, model, and promote these skills to their students (Denham et al., 2012; Katz et al., 2020).

While teachers' social and emotional competences influence the quality of teacher-student relationships, and the quality of learning environments (Morris et al., 2013; Poulou, 2017), the role of teachers' own social and emotional competences has been largely overlooked (Jones et al., 2013). On the contrary, several prevention programs have been developed for teaching students social and emotional competences (e.g., Ashdown & Bernard, 2012; Cefai et al., 2018; Collaborative for Academic Social and Emotional Learning, 2009; Durlak et al., 2022; Hart et al., 2020). In interventions focusing exclusively on students there is a paucity of evidence examining teacher outcomes (Kim et al., 2021). In Greece, numerous mental health programs have been implemented, especially in primary schools and central cities, but they were developed to promote mainly students' social and emotional competences (Amal Alliance, 2022; Chiementi & Triliva, 1994; Δώνη & Γιώτσα, 2017; Hatzichristou & Lianos, 2016; Kourmoussi et al., 2017, 2018; Πλατσίδου, 2015; Stylianidis, et al., 2016; Triliva et al., 2014).

However, there is potential for teachers to also benefit from the implementation of SEL programs (Kim et al., 2021), either these programs were initially developed for students' social and emotional competences or directly addressing teachers' social and emotional competences. Lizuka et al. (2014) conducted the first study to evaluate the impact of a combined intervention targeting both teachers' and students' social and emotional skills. Their results showed that the intervention helped students to decrease their levels of anxiety, but the authors provided no information about teachers' outcomes. A meta-analysis of 43 studies evaluating the efficacy of school based SEL interventions, showed small to medium effect sizes favoring the experimental comparing the control groups, with SEL interventions improving teachers' social and emotional competences, well-being and minimizing psychological distress (Oliveira et al., 2021). Research emphasizing teachers' SEL per se revealed positive impact on teachers' personal well-being and positive emotions (Jennings & Greenberg, 2009; Poulou, 2017), and decrease in their psychological distress (Jennings et al., 2013; Domitrovich et al., 2016). When SEL interventions were developed for teachers only, positive outcomes occur for both teachers and students, although it was not always possible to measure the direct or indirect effects of SEL to teachers or students separately (Oliveira et al., 2021; Schonert-Reichl et al., 2015).

### ***SEL school-based programs and teachers' mental health during pandemic***

The limited research on teachers' own social and emotional competences could be attributed to the assumption that teachers are already competent and have the tacit knowledge to act as social and emotional competent models for their students (Elliot et al., 2011; Jennings & Greenberg, 2009). This assumption, however, was faltered during the COVID-19 pandemic during which teachers had to take care of their own mental health. From the spring of 2020 and during the entire academic year 2020-2021, the COVID-19 pandemic brought about a variety of changes but also new demands and challenges for the education system. Teachers across the world had to adapt, continue

schooling and protect students and their own well-being. Specifically, up to the pandemic, teaching almost exclusively depended on teachers' mental health, which was linked to teaching performance. Teachers need to feel well with themselves to be able to effectively function in the teaching-learning process, create appropriate conditions for students in educational contexts that are conducive to learning, and further promote students' well-being.

The extant research on teachers' well-being during the pandemic revealed worrying results for teachers' well-being and health in general (Cipriano & Brackett, 2020). High rates of overweight/obesity, weekly alcohol consumption and smoking were observed among 786 Greek primary teachers (Zagkas et al., 2023). Most participants reported moderate stress levels, while more than half of them experiencing sleep problems (Zagkas et al., 2023).

Nevertheless, during the early months of the pandemic teachers noted positive changes as well. They reported, for example, feeling more appreciative of things they took for granted, finding greater meaning in their work, realizing the importance of feeling supported by family and friends and being connected to students (Baker et al., 2021). All these factors have been found to foster resilience in face of crisis (Fredrickson et al., 2003). Resilience as a factor in mental health promotion has attracted research interest in the past but also during the COVID-19 pandemic. There is evidence that psychological symptoms during the pandemic were related to resilience (Serafini et al., 2020). Teachers who experienced more stressors reported more serious mental health problems, whereas teachers who experienced more protective factors were more likely to find teaching and coping with the pandemic easier (Baker et al., 2021), and emphasize the importance of resilience during crisis (Beltman et al., 2011).

Besides the individual-focused interventions for teachers, there are interventions linking the school context and teachers through school-based programs that promote well-being in the school context. Following the COVID-19 experience, SEL skills and resilience cultivation for teachers and students in schools became an outstanding need (Katz et al., 2020). This need resulted to the implementation of the Promoting Mental Health Program at Schools (PROMEHS), a school-based mental health curriculum designed to address students' and teachers' mental health. PROMEHS program is a widely used intervention which acknowledges the importance of collaboration among students, teachers, families, school leaders, community stakeholders and policy makers (Cefai et al., 2022). PROMEHS was implemented during the 2020-2021 academic year, with the collaboration of parents, school directors and policy makers. The PROMEHS curricula activities met the quality criteria identified by CASEL (2020) and aimed to develop a set of social and emotional competences, particularly helpful in face of challenging situations (Hascher et al., 2021; Holtge et al., 2021). The PROMEHS framework advocates for the promotion of teacher well-being as a vital component of effective school mental health strategies (Cavioni et al., 2023). PROMEHS was implemented in six European countries at the same time (Italy, Portugal, Romania, Croatia, Greece, and Latvia; see Cavioni et al., 2023; Colomeischi et al., 2022), and although it was not initially designed as such, it was administered online due to COVID-19 restrictions. The PROMEHS interventions used a multi-method design (qualitative and quantitative data), multi-site and multi-informant (school leaders, teachers, support staff, students,

parents/carers, and policy makers). Data on students' social and emotional competences, resilience, emotional and behavioral difficulties, and academic achievement were collected with student self-report measures, as well as teacher and parent measures. Data on teachers' own social and emotional competences, resilience and teaching efficacy were collected through teacher self-report measures. In the present paper, due to space limitations, we address only teachers' own social and emotional competences following a PROMEHS intervention program designed to promote students' and teachers' mental health at schools.

### ***The present study***

The present study aimed to address changes in teachers' perceptions of their social and emotional competences and resilience following a PROMEHS intervention targeting both teachers' and students' social and emotional competences. The specific research questions were:

- 1) Do teachers perceive changes in their own social and emotional competences following an intervention program promoting mental health at schools?
- 2) Do teachers perceive changes in their resilience following an intervention program promoting mental health at schools?

The hypothesis was that the intervention would increase teachers' awareness of positive changes in their social and emotional competences as well as mental health and resilience.

## **METHOD**

### ***Recruitment and Participants***

An open call to schools of Achaia prefecture in Greece resulted in volunteering schools, which in turn recruited teachers. The study was in accordance with the recommendations of the Ethics Committee of the University of Patras. Participants were ensured about the anonymity and confidentiality of their responses by receiving codes and completed a formal online consent form. One hundred fifty-two teachers teaching in public schools in Achaia prefecture (12 male; 7.9% and 140 females; 92.1%), were divided into experimental ( $n = 82$ ; 53.9%) and control ( $n = 70$ ; 46.1%) groups. Teachers from the same schools were grouped together for the homogeneity of the intervention. Fifty of them (32.9%) were kindergarten teachers, teaching students aged 5-6 years old, 60 (39.5%) were primary school teachers, teaching students aged 6-12 years old, 28 (18.4%) were junior high school teachers, teaching students 12-15 years old, and 16 (10.5%) were lyceum schoolteachers, teaching students 15-18 years old. Teachers completed questionnaires for their own social and emotional competences, and resilience.

### ***Design and Measures***

The study was a quasi-experimental cluster study involving experimental and control schools. The schools were matched for socio-economic status (SES), location (regional or rural), and number of students enrolment. Data collection took place at two timepoints (pre and post the intervention) in both experimental and control schools.

#### ***Social and Emotional Competence for Teachers (SECTRS)***

Teachers' social and emotional competences were measured with the Social and Emotional Competence for Teachers (SECTRS; Tom, 2012). SECTRS comprises 25 items reflecting the four core SEL competences (CASEL, 2020), namely: *Teacher-student relationships*, describing positive interactions between teachers and students (7 items), with a sample item "I am aware of how all of my students are feeling"; *Emotion-Regulation*, describing teachers' ability to manage their own emotions (6 items), with a sample item "I nearly always stay calm when a student upsets me"; *Social-awareness*, describing teachers' sensitivity to diversity (6 items), with a sample item "I appreciate individual and group differences (e.g., cultural, linguistic, socioeconomic, etc.)", and *Interpersonal relationships*, describing teachers' relationships with parents and staff (6 items). A sample item is "In conflict situations with staff members, I can effectively negotiate solutions". Responses could range from 1 (strongly disagree) to 6 (strongly agree). The SECTRS has been validated in several European countries (Grazzani et al., 2024) and in Greece (Poulou et al., 2022). Cronbach's alphas for the current study were .79 for teacher-student relationships, .72 for emotion regulation, .68 for social-awareness and .67 for interpersonal relationships.

#### ***The Connor Davidson Resilience Scale (CD-RISC, 10)***

The Connor Davidson Resilience Scale (CD-RISC, 10; Campbell-Sills & Stein, 2007) is the short version of the Connor Davidson Scale (CD-RISC, Connor & Davidson, 2003), developed to measure the ability to cope with adversity. It can be used with adults 18-64 years old. It consists of 10 items (e.g., "I am able to adapt when changes occur", or "I can deal with whatever comes my way) on 5-point Likert scale responses (0 = not at all, to 4 = true nearly all the time). The CS-RISK, 10 has been translated and adapted in Greek (Tsigkaropoulou et al., 2018). Cronbach's alpha for the scale in current study was .89.

#### ***The PROMEHS curriculum***

The PROMEHS is a mental health curriculum designed to address teachers' and students' mental health. The curriculum was designed following the high-quality criteria identified by CASEL (2020). In the present study we used two PROMEHS core modules: a) *Social and Emotional Learning* (SEL), that is, the process of cultivating skills and attitudes to students and teachers to develop healthy relationships with self and others. CASEL (2020) identifies five core inter-related SEL competencies and skills, namely, self-awareness, self-management, social awareness, relationship skills, and responsible decision-making; b) *Promoting resilience*, that is, the dynamic

process of successful adaptation in the contexts of significant threats to development (Ungar, 2018).

### ***Teacher training***

Teachers in the experimental group received training by expert teachers (16 hours) and supervision on curriculum implementation (9 hours) right after the pretest measures. Teachers of the control group received the same training but after the posttest. To ensure the quality and fidelity of the implementation, the training and the supervision sessions during the implementation process were led by teacher trainers with MA and Ph.D. degrees in Educational Psychology and experience in teacher training. The topics addressed were introduction to PROMEHS curriculum, social and emotional skills, resilience, emotional and behavioral difficulties, student-teacher relationships, teachers' coping strategies for their own mental health, and implementation of PROMEHS activities in classroom and at home. Teacher training took place before PROMEHS implementation for the experimental group and at the end of PROMEHS implementation for the control group (see method section).

### ***Implementation of the PROMEHS curriculum***

The PROMEHS curriculum implementation was carried out over a period of six months (November 2020 to May 2021). Implementation had been planned to be held face to face but due to COVID-19 restrictions, the curriculum was implemented mainly on-line. Teachers had to implement 12 activities (one per week), covering all parts of the program, namely SEL, resilience, and preventing emotional and behavioral difficulties. A set of activities were also applied to assess the program's fidelity (the extent to which the implemented intervention corresponds to the initially scheduled intervention), dosage (the degree of delivered intervention), quality (how well different program components have been conducted), participants' responsiveness (the degree of participants' engagement, namely teacher, students, parents), and adaptation (changes of the original program occurred during the implementation) (Martinsone, et al., 2022).

## **RESULTS**

### ***Teachers' perceptions of their social and emotional competences***

Participant teachers were matched by code to combine the pretest and posttest scores. Only teachers who had scores in both tests were included in the data set. Missing values were replaced by the mean test item score. Table 1 presents teachers' ratings on their social and emotional competences.



**Table 1: Teachers' self-reports on their own social and emotional competence**

Subscale	Group	Phase	Mean	SD	N
Teacher-Student Relationships	Experimental	Pre	4.76	0.68	41
		Post	4.98	0.61	41
	Control	Pre	4.78	0.46	35
		Post	4.93	0.50	35
Emotion Regulation	Experimental	Pre	4.55	0.61	41
		Post	4.71	0.56	41
	Control	Pre	4.65	0.65	35
		Post	4.75	0.53	35
Social Awareness	Experimental	Pre	5.26	0.61	41
		Post	5.45	0.48	41
	Control	Pre	5.31	0.38	35
		Post	5.17	0.50	35
Interpersonal Relationships	Experimental	Pre	4.67	0.56	41
		Post	4.89	0.54	41
	Control	Pre	4.72	0.45	35
		Post	4.63	0.48	35
Resilience	Experimental	Pre	3.81	0.60	41
		Post	4.05	0.45	41
	Control	Pre	3.79	0.55	35
		Post	3.83	0.51	35

Two-way mixed ANOVAs (Group: Experimental-Control X Testing Phase: Pretest-Posttest) were conducted to test the differences between the experimental and control groups teachers' perceptions of their social and emotional competencies as well as mental health resilience before and after the PROMEHS implementation. The results showed that there was no significant main effect of group in any analysis. However, there were significant effects of phase or interaction effects of group (experimental and control) with phase (pretest and posttest) in Social Awareness and Interpersonal Relationships. Specifically, ANOVA results showed that there was no significant difference between experimental and control groups on the Teacher-student Relationships,  $F(1, 74) = .016, p > .05$ , but there was significant main effect of testing phase, pre- and posttest phases,  $F(1, 74) = 15.60, p < .001, \eta_p^2 = .17$ . The nonsignificant interaction of group with phase,  $F(1, 227) = 0.61, p = .43$ , suggests that both experimental and control groups evolved in the same way. Also, nonsignificant difference between experimental and control groups was found in Emotion Regulation,  $F(1, 74) = .30, p = .58$ . However, there was a significant main effect of testing phase,  $F(1, 74) = 5.46, p < .02, \eta_p^2 = .06$ , although the effect size was small. The interaction between group and phase was nonsignificant,  $F(1, 227) = 0.59, p > .05$ . Nonsignificant difference was found between the experimental and control groups in Social Awareness,  $F(1, 74) = 1.30, p > .05$ ; the main effect of phase was also nonsignificant,  $F(1, 74) = 0.19, p > .05$ . The interaction effect of Group by Phase was, however, significant,  $F(1, 227) = 9.41, p < .001, \eta_p^2 = .11$  (see Figure 1), denoting that the experimental group scored higher in the social awareness compared to the control group following the intervention. Similarly, no significant difference was

found between experimental and control groups on the Interpersonal Relationships,  $F(1, 74) = 0.89, p > .05$ . Further, a nonsignificant main effect of testing phase was found,  $F(1, 74) = 0.29, p > .05$ ; there was, however, a significant interaction of Group by Phase,  $F(1, 227) = 8.19, p < .001, \eta_p^2 = .10$  (see Figure 2). Finally, there was a nonsignificant main effect of group in Resilience,  $F(1, 74) = 1.80, p > .05$ , as well of phase,  $F(1, 74) = 2.43, p > .05$ . The Group X Phase interaction was also nonsignificant,  $F(1, 227) = 1.41, p > .05$ . As shown in Figure 3, there was only a small nonsignificant improvement in resilience of teachers in the experimental group compared to the control group. The mean resilience scores lied in a very low range (from 3.8 to 4.05) of the resilience scale.

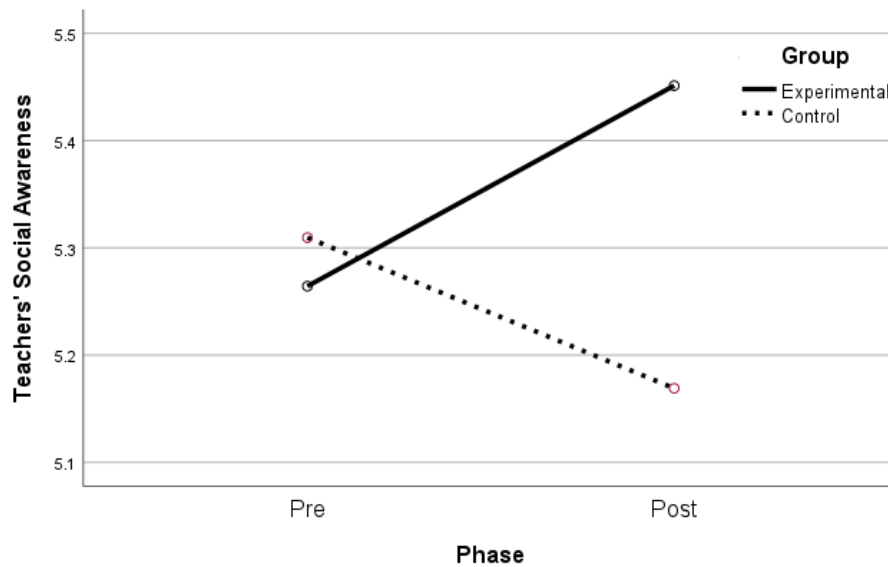


Figure 1: Teachers' perceptions of their social awareness as a function of group

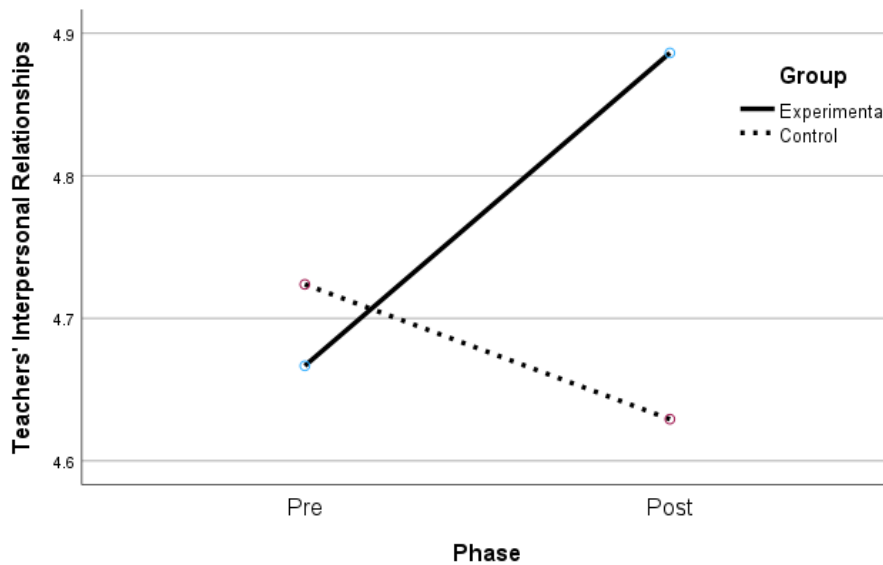
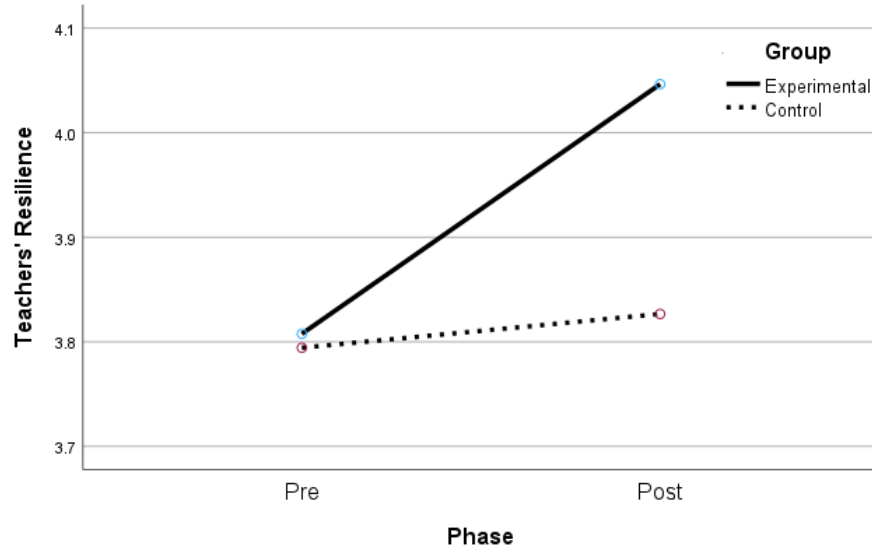


Figure 2: Teachers' perceptions of their interpersonal relationships as a function of group



*Figure 3: Teachers' perceptions of their resilience as a function of group*

## DISCUSSION

The study presented a quasi-experimental cluster research investigating changes in teachers' social and emotional competences and resilience following the implementation of an intervention promoting mental health at schools. Previous research has mainly focused on the effect of mental health programs delivered at schools on students' outcomes with limited attention paid to teachers, as the main implementation agents (Gee et al, 2021). This study described a novel approach to building on teachers' own social and emotional competences while implementing a program targeting simultaneously teachers' and students' mental health. To our knowledge, this is the first European study to examine teachers' perceptions of their own social and emotional competences following a school-based intervention program during pandemic, in Greece.

Our findings revealed moderate changes in teachers' social and emotional competences after the PROMEHS implementation. The changes were observed mainly in social awareness and interpersonal relationships as well as resilience in the experimental group. We could assume that these moderate changes in perceptions might be due to the implementation of PROMEHS program, but still this assumption warrants further investigation. Although training and implementation was exclusively online, our study could support the argument that teachers benefit from implementing a SEL program, both directly by teaching activities to students, and indirectly when they practice and model the skills they teach (Kim et al, 2021).

Teachers have come to understand that they need SEL training and coaching, and that their own modeling of social and emotional competences through teaching is critical to student success (Jones et al., 2013; Poulou & Denham, 2022). Nevertheless, teachers receive little support and training for the implementation of SEL programs in their classrooms, and even less support for the

cultivation of their own social and emotional skills (Jones et al., 2013). Teacher preparation programs provide no guidelines or “best practices” for prospective teachers, either to implement SEL in their classrooms or develop their own SEL for their own well-being (Schonert-Reichl, 2017).

Teachers' own social and emotional skills are vital to teaching, they need to be cultivated early in their teaching preparation and supported throughout their careers (Caspary, 2021; Jones et al., 2013). It is argued that if we want to reach students, we need to support teachers (Schonert-Reichl et al., 2017). A strong start for helping teachers is to provide them opportunities for cultivating their own emotional competences (Oberle et al., 2020). Research suggests that socially and emotionally competent teachers can understand and manage their own and others' emotions, have strong relationship-building capabilities, and report higher self-efficacy in teaching (Jennings & Greenberg, 2009). Evidence showing benefits of such training highlight the importance of providing teachers with emotional skills to improve coexistence in the classroom, the feeling of community, educational well-being, attention to educational diversity, and ultimately, academic results (Pozo-Rico et al., 2023). Furthermore, individuals' high social and emotional abilities have a positive impact on their resilience (Garcia-Martinez et al., 2022) that enables them deal with every day's adversity of the teaching profession. By promoting teachers' social and emotional competences we avoid the devastating ripple effects of teacher burnout (Herman et al., 2017) and influence their own well-being (Schonert-Reichl et al., 2017).

As highlighted by these studies and reinforced by the COVID-19 pandemic, there is need to empower teachers with social and emotional abilities and skills to navigate in the uncertainty, and complexity of teaching profession. By helping teachers to develop an understanding of their own social and emotional competences and resilience, we could support their functioning and their ongoing engagement with teaching profession. Current study adds to the growing empirical evidence for the positive impact of SEL programs to teachers (Jennings et al., 2013; Oliveira et al., 2021), and to the need for effective teacher preparation programs (Katz et al., 2020). Our findings provide important insights about the social and emotional skills required for the classroom context that could be targeted in preservice teacher preparation programs and professional development initiatives for in-service teachers (Jennings & Greenberg, 2009). We therefore suggest that teacher training institutions should pay attention to teachers' personal factors such as social and emotional competences and resilience to cultivate positive professional attitudes effectively. Social and emotional competences can be taught and learnt, thus the inclusion of Social and Emotional Learning education in teacher training courses is necessary, including implementation and assessment of such programming to support teachers (Katz et al., 2020).

### ***Limitations of the study***

Our study has several limitations that must be acknowledged. The context consideration that limited our efforts need to be considered during data interpretation. School closures and remote learning due to COVID-19 pandemic resulted in higher attrition rate for schools and participants than anticipated. Although the intervention was implemented online, we could not preclude

potential communication between teachers in the experimental or control groups about the intervention, which might have affected their responses. Our results might differ if PROMEHS activities had been implemented in real classrooms. Further, respondents' voluntary participation and the use of self-report measures are subject to bias and social desirability. Employing a multimethod and multi-reporter design in conjunction with direct observations should be a goal of future research addressing the questions we explore. Finally, it is also important to point out that our data were mainly descriptive precluding causal conclusions.

### ***Implications***

The pre- and posttest measures of the study provide some indication of the efficacy of the PROMEHS intervention program in improving teachers' social and emotional competences and resilience, in tele-conference situations. Further research is needed to investigate the effects of PROMEHS in typical, face to face classrooms. The results of this study could have implications on the on-going education and training of teachers. The program focused first on the promotion of teachers' mental health, giving them knowledge, skills and hands-on activities for their own professional development along with the materials produced by teachers for students' development of social and emotional competences and mental health. Our research findings further render support to the notion that through school-based interventions focused on both teachers' and students' social and emotional competences could promote teachers' mental health.

## **REFERENCES**

- Amal Alliance. (2022). *Colors of kindness*. <https://colorsofkindness.org/>
- Ashdown, D. M., & Bernard, M. E. (2012). Can explicit instruction in social and emotional learning skills benefit the social-emotional development, well-being, and academic achievement of young children? *Early Childhood Education Journal*, 39, 397-405. <https://doi.org/10.1007/s10643-011-0481-x>
- Baker, C. N., Peele, H., Daniels, M., Saybe, M., Whalen, K., Overstreet, S., & Trauma-Informed Schools Learning Collaborative (2021). The experience of COVID-19 and its impact on teachers' mental health, coping and teaching. *School Psychology Review*, 50(4), 491-504. <http://doi.org/10.1080/2372966X.2020.1855473>
- Beltman, S., Mansfield, C., & Price, A. (2011). Thriving not just surviving: A review of research on teacher resilience. *Educational Research Review*, 6(3), 185-207. <https://doi.org/10.1016/j.edurev.2011.09.001>
- Brunetti, G. J. (2006). Resilience under fire: Perspectives on the work of experiences, inner city high school teachers in the United States. *Teaching and Teacher Education*, 22(7), 812-825. <https://doi.org/10.1016/j.tate.2006.04.027>

- Campbell-Sills, L., & Stein, M. B. (2007). Psychometric analysis and refinement of the Connor–Davidson Resilience Scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress, 20*(6), 1019-1028. <https://doi.org/10.1002/jts.20271>
- CASEL. (2009). *SEL: What is it and how does it contribute to students' academic success?* [http://casel.org/wp-content/uploads/Tool2\\_2009.pdf](http://casel.org/wp-content/uploads/Tool2_2009.pdf)
- CASEL. (2013). Collaborative for Academic, Social, and Emotional Learning. *CASEL Guide. Effective social and emotional learning programs. Preschool and elementary school edition.* CASEL.
- CASEL. (2020). *CASEL evidence-based social and emotional learning programs: CASEL criteria updates and rationale.* [http://casel.org/wp-content/uploads/2021/01/11\\_CASEL\\_Program-Criteria-Rationale.pdf](http://casel.org/wp-content/uploads/2021/01/11_CASEL_Program-Criteria-Rationale.pdf)
- Caspary, P. C. (2021). *Teachers' experiences of Social Emotional Learning (SEL) programs' influence on their SEL competencies.* Dissertation submitted for the degree of Doctor of Education. Edgewood College.
- Cavioni, V., Grazzani, I., Ornaghi, V., Agliati, A., Gandellini, S., Cefai, C., Camilleri, L., Bartolo, B., Tatalovic Vorkapic, S., Golob, L., Poulou, M., Martinsone, B., Supe, I., Simoes, C., Lebre, P., Colomeischi, A., Rusu, P., Acostoaie, L., Vintur, T., & Conte, E. (2023). A multi-component curriculum to promote teachers' mental health: Findings from the PROMEHS program. *International Journal of Emotional Education.* <https://doi.org/10.56300/KFNZ2526>
- Cefai, C., Camilleri, L., Bartolo, P., Grazzani, I., Cavioni, V., Ornaghi, V., Tatalovic Vorkapic, S., Poulou, M., Martinsone, B., Stokenberga, I., Simoes, S., Colomeischi, A., (2022). (2022). The effectiveness of a school-based, universal mental health programme in six European countries. *Frontiers in Psychology*, <https://doi.org/10.3389/fpsyg.2022.925614>
- Cefai, C., Bartolo, P., Cavioni, V., & Downes, P. (2018). *Strengthening social and emotional education as a core curricular area across the EU: A review of the international evidence: Analytical report.* Publications Office. <https://doi.org/10.2766/664439>
- Chiementi, G., & Triliva, S. (1994). Cognitive and behavioral effects of social skills training on Greek and Lebanese elementary-school children. *International Journal of Mental Health, 23* (4), 53-68.
- Cipriano, C., & Brackett, M. (2020). Teachers are anxious and overwhelmed. They need SEL now more than ever. *EdSurge News.* <https://www.edsurge.com/news/2020-04-07-teachers-are-anxious-and-overwhelmed-they-need-sel-now-more-than-ever>
- Colomeischi, A. A., Duca, D. S., Bugor, L., Rusu, P. P., Grazzani, I., & Cavioni, V. (2022). Impact of a school mental health program on children's and adolescents' socio-emotional skills and psychosocial difficulties. *Children, 9*, 1661. <https://doi.org/10.3390/children9111661>
- Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor–Davidson Resilience Scale (CD-RISC). *Depression and Anxiety, 18*(2), 76–82. <https://doi.org/10.1002/da.10113>

- Denham, S. A., Bassett, H. H., & Zinsser, K. (2012). Early childhood teachers as socializers of young children's emotional competence. *Early Childhood Educational Journal*, 40(3), 137–143. <https://doi.org/10.1007/s10643-012-0504-2>
- Domitrovich, C. E., Bradshaw, C. P., Berg, J. K., Pas, E. T., Becker, K. D., Musci, R. (2016). How do school-based prevention programs impact teachers? Findings from a randomized trial of an integrated classroom management and social-emotional program. *Prevention Science*, 17, 325-337. <http://doi.org/10.1007/s11121-015-0618-z>
- Δώνη, Ε., & Γιώτσα, Α. (2017). Επισκόπηση προγραμμάτων πρόωμης παρέμβασης για την καλλιέργεια κοινωνικών και συναισθηματικών δεξιοτήτων στο νηπιαγωγείο. [Review of early intervention programs for the cultivation of social and emotional skills in preschool]. *Journal of Research in Education and Training*, 10(1), 68–97. <https://doi.org/10.12681/jret.10225>
- Durlak, J. A., Mahoney, J. L., & Boyle, A. E. (2022). What we know, and what we need to find out about universal, school-based social and emotional learning programs for children and adolescents: A review of meta-analyses and directions for future research. *Psychological Bulletin*, 148(11-12), 765–782. <https://doi.org/10.1037/bul0000383>
- Elliot, J. G., Stemler, S. E., Stenberg, R. J., Grigorenko, E. L., & Hoffman, N. (2011). The socially skilled teacher and the development of tacit knowledge. *British Educational Research Journal*, 37, 83-103.
- Fredrickson, B., Tugade, M., Waugh, C., & Larkin, G. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11, 2001. *Journal of Personality and Social Psychology*, 84(2), 365-376. <https://doi.org/10.1037/0022-3514.84.2.365>
- Garcia-Martinez, I., Augusto-Landa, J. M., Quijano-Lopez, R., & Leon, S. P. (2022). What are pre-service teachers like? Analysis of their psychosocial profile. *Personality and Social Psychology*, 63, 555-564. <https://doi.org/10.1111/sjop.12834>
- Gee, B., Wilson, J., Clarke, T., Farthing, S., Carroll, B., Jackson, C, (2021). Review: Delivering mental health support within school and colleges -A thematic synthesis of barriers and facilitators to implement of indicated psychological interventions for adolescents. *Child and Adolescent Mental Health*, 26(1), 34-46. <https://doi.org/10.1111/camh.12381>
- Gilmour, A. F., Sandilos, L. E., Pilny, W. V., Schwartz, S., & Wehby, J. H. (2022). Teaching students with emotional/behavioral disorders: Teachers' burnout profiles and classroom management. *Journal of Emotional and Behavioral Disorders*, 30(1), 16-28. <https://doi.org/10.1177/10634266211020258>
- Grazzani, I., Martinsone, B., Simoes, C., Cavioni, V., Conte, E., Ornaghi, V., & Pepe, A. (2024). Assessing teachers' social and emotional competence: The validation of SECTRS in Italy, Latvia, and Portugal. *International Journal of Emotional Education*, 16(1), 70 – 87. [www.um.edu.mt/ijee](http://www.um.edu.mt/ijee)
- Hargreaves, A. (2000). Mixed emotions: Teachers' perceptions of their interactions with students. *Teaching and Teacher Education*, 16(8), 811-826.



- [https://doi.org/10.1016/S0742-051X\(00\)00028-7](https://doi.org/10.1016/S0742-051X(00)00028-7)
- Hart, S. C., DiPerna, J. C., Lei, P. W., & Cheng, W. (2020). Nothing lost, something gained? Impact of a Universal Social-Emotional Learning Program on future state test performance. *Educational Researcher*, 49(1), 5-19.  
<https://doi.org/10.3102/0013189X19898721>
- Hascher, T., Beltman, S., & Mansfield, C. (2021). Teacher wellbeing and resilience: Towards an integrative model. *Educational Research*, 63(4), 416-439.  
<https://doi.org/10.1080/00131881.2021.1980416>
- Hatzichristou, C., & Lianos, P. G. (2016). Social and emotional learning in the Greek educational system: An Ithaca journey. *The International Journal of Emotional Education*, 8 (2), 105-127.
- Herman, K. C., Hickmon-Rosa, J. E., & Reinke, W. M. (2017). Empirically derived profiles of teacher stress, burnout, self-efficacy, and coping and associated student outcomes. *Journal of Positive Behavior Interventions*, 2, 90-100.
- Holtge, J., Theron, L., Cowden, R. G., Govender, K., Maximo, S. I., Carranza, J. S., Kapoor, B., Tomar, A., vanRensburg, A., Lu, S., Hu, H., Cavioni, V., Agliati, A., Grazzani, I., Smedema, Y., Kaur, G., Hurlington, K. G., Sanders, J., Munford, R., Colomeischi, A. A., Panter-Brick, C., Sarathamani, S., Boratne, A. V., Avudaiappan, S., Patil, R., Borualogo, I., Katsi, M., Jefferies, P., & Ungar, M. (2021). A cross-country network analysis of adolescent resilience. *Journal of Adolescent Health*, 68(3), 580-588.  
<https://doi.org/10.1016/j.jadohealth.2020.07.010>
- Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., & Zhu, L. X. (2020). Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *EClinicalMedicine*, 24, 100424. <https://doi.org/10.1016/j.eclinm.2020.100424>
- Jennings P. A., Brown, J. L., Frank, J. L., Doyle, S., Oh, Y., & Davis, R. (2017). Impacts of the CARE for Teachers program on teachers' social and emotional competence and classroom interactions. *Journal of Educational Psychology*, 109, 1010-1028.  
<https://doi.org/10.1037/edu0000187>
- Jennings, P. A., Frank, J. L., Snowberg, K. E., Coccia, M. A., & Greenberg, M. T. (2013). Improving classroom learning environments by cultivating awareness and resilience in education (CARE): Results from two randomized, waitlist-control field trials. *Journal of Educational Psychology*, 28, 374-390.
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research*, 79(1), 491-525. <https://doi.org/10.3102/0034654308325693>
- Jones, S. M., Bouffard, S. M., & Weissbourd, R. (2013). Educators' social and emotional skills vital to learning. *Phi Delta Kappa*, 94 (8), 62-65.
- Kariou, A., Koutsimani, P., Montgomery, A., & Lainidi, O. (2021). Emotional labor and



- burnout among teachers: A systematic review. *International Journal of Environmental Research and Public Health*, 18(23), 12760. <https://doi.org/10.3390/ijerph182312760>
- Katz, D., Mahfouz, J., & Romas, S. (2020). Creating a foundation of well-being for teachers and students starts with SEL curriculum in teacher education programs. *Northwest Journal of Teacher Education*, 15(2), <https://doi.org/10.15760/nwjte.2020.15.2.5>
- Kim, S., Crooks, C. V., Bax, K., & Shokoohi, M. (2021). Impact of trauma-informed training and mindfulness-based social-emotional learning program on teacher attitudes and burnout: A mixed-methods study. *School Mental Health*, 13, 55-68. <https://doi.org/10.1007/s12310-020-09406-6>
- Kourmousi, N., Markogiannakis, G., Tzavara, C., Kounenou, K., Mandrikas, A., Christopoulou, E., & Koutras, V. (2018). Students' psychosocial empowerment with the "Steps for Life" personal and social skills Greek elementary program. *International Electronic Journal of Elementary Education*, 10 (5), 535-549.
- Kourmousi, N., Salagianni, M., Merakou, K., Tzavara, C., & Koutras, V. (2017). Evaluation of the "Steps for Life" personal and social skills Greek K-Curriculum. *Creative Education*, 8, 1912-1940. <https://doi.org/10.4236/ce.2017.812131>
- Lee, M., & Van Vlack, S. (2018). Teachers' emotional labour, discrete emotions, and classroom management self-efficacy. *Educational Psychology*, 38, 669-686. <https://doi.org/10.1080/01443410.2017.1399199>
- Lizuka, C., A., Barrett, P. M., Gillies, R., Cook, C. R. & Marinovic, W. (2014). A combined intervention targeting both teachers' and students' social-emotional skills: Preliminary evaluation of students' outcomes. *Australian Journal of Guidance*, 24(2), 152-166. <https://doi.org/10.1017/jgc.2014.12>
- Mansfield, C. F. (2020). *Cultivating teacher resilience: International approaches, applications and impact*. Springer, Open access book.
- Martinson, B., Stokenberga, I., & Grazzani, I. (2022). Monitoring system of implementation of the Promoting Mental Health at Schools (PROMEHS) program. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1043001>
- Morris, C. A., Denham, S. A., Bassett, H. H., & Curby, T. W. (2013). Relations among teachers' emotion socialization beliefs and practices and preschoolers' emotional competence. *Early Education & Development*, 24, 979-999.
- Ngui, G. L., & Lay, Y. F. (2020). The effect of emotional intelligence, self-efficacy, subjective well-being and resilience on student teachers' perceived practicum stress: A Malaysian Case Study. *European Journal of Educational Research*, 9(1), 277-291. <https://doi.org/10.12973/eu-jer.9.1.277>
- Oberle, E., Gist, A., Cooray, M. S., & Pinto, J. B. (2020). Do students notice stress in teachers? Associations between classroom teacher burnout and students' perceptions of teacher social-emotional competence. *Psychology in the Schools*, 57(11), 1741-1756. <https://doi.org/10.1002/pits.22432>

- Oliveira Carvalho, P., Hülsdünker, T., & Carson F. (2021). The impact of the COVID-19 lockdown on European students' negative emotional symptoms: A systematic review and meta-analysis. *Behavior Science, 12*(3). <https://doi.org/10.3390/bs12010003>
- Πλατσίδου, Μ. (2015). Προγράμματα ανάπτυξης συναισθηματικών και κοινωνικών ικανοτήτων σε άτομα με ειδικές εκπαιδευτικές ανάγκες ή/και αναπηρίες [Programs of social and emotional competences development in students with special educational needs and/or impairment]. <http://repository.edulll.gr/edulll/handle/10795/1896>. Retrieved 12/2018.
- Poole, J. C., Dobson, K. S., & Pusch, D. (2017). Childhood adversity and adult depression: The protective role of psychological resilience. *Child Abuse & Neglect, 64*, 89-100. <https://doi.org/10.1016/j.chiabu.2016.12.012>
- Poulou, M. (2017). An examination of the relationship among teachers' perceptions of social-emotional learning, teaching efficacy, teacher-student interactions and students' behavioral difficulties. *International Journal of School and Educational Psychology, 5*(2), 126-136. <https://doi.org/10.1080/21683603.2016.1203851>.
- Poulou, M. S., Grazzani, I., Cavioni, V., Ornaghi, V., Conte, E., Cefai, C, Camilleri, L., & Bartolo, P. (2022). Teachers' and students' changes in social and emotional competences following the implementation of PROMEHS: A European program for Promoting Mental Health at Schools. *Educational Research Application, 7*(1), <https://doi.org/10.29011/2575-7032.100205>
- Poulou, M., & Denham, S. A. (2022). Teachers' emotional expressiveness and coping reactions to students' emotions: Associations with students' social-emotional competences and school adjustment. *Early Education and Development, 34*(3), 607–625. <https://doi.org/10.1080/10409289.2022.2053486>
- Pozo-Rico, T., Poveda, R., Gutiérrez-Fresneda, R., Castejón, J. L., & Gilar-Corbi, R. (2023). Revamping teacher training for challenging times: Teachers' well-being, resilience, emotional intelligence, and innovative methodologies as key teaching competencies. *Psychology Research and Behavior Management, 5*(16), 1-18, <https://doi.org/10.2147/PRBM.S382572>
- Schonert-Reichl, K. A., Kitil, M. J., & Hanson-Peterson, J. (2017). *To reach the students, teach the teachers: A national scan of teacher preparation and social and emotional learning*. A report prepared for the Collaborative for Academic, Social, and Emotional Learning (CASEL). University of British Columbia.
- Schonert-Reichl, K. A., Oberle, E., Lawlor, M. S., Abbott, D., Thomson, K., Oberlander, T. F., & Diamond, A. (2015). Enhancing cognitive and social-emotional development through a simple-to-administer mindfulness-based school program for elementary school children: A randomized controlled trial. *Developmental Psychology, 51*, 52-66. <https://doi.org/10.1037/a0038454>
- Schneider, T. R., Lyons, J. B., & Khazon, S. (2013). Emotional intelligence and resilience. *Personality and Individual Differences, 55*(8), 909-914.
- Serafini, G., Parmigiani, B., Amerio, A., Aguglia, A., Sher, L., Amore, M. (2020). The psychological impact of COVID-19 on the mental health in the general population.

- Quarterly Journal of Medicine: An International Journal of Medicine*, 113, 531-537.  
<https://doi.org/10.1093/qjmed/hcaa201>
- Sisask, M., Varnik, P., Varnik, A., Apter, A., Balazs, J., & Balint, M. (2014). Teacher satisfaction with school and psychological well-being affects their readiness to help children with mental health problems. *Health Education Journal*, 73(4), 382-393.
- Squires, V., Walker, K., & Spurr, S. (2022). Understanding self-perceptions of wellbeing and resilience of preservice teachers. *Teaching and Teacher Education*, 118, [1-16](https://doi.org/10.1016/j.tate.2022.103828).  
<https://doi.org/10.1016/j.tate.2022.103828>
- Stillman, S. B., Stillman, P., Martinez, L., Freedman, J., Jensen, A. L., & Leet, C. (2018). Strengthening social emotional learning with student, teacher and schoolwide assessments. *Journal of Applied Psychology*, 55, 71-92. <https://doi.org/10.1016/j.appdev.2017.07.010>
- Stylianidis, S., Belekou, P., Peppou, L. E., & Vakalopoulou, A. (2016). Promoting mental health: From theory to best practice. *Social and Community Psychiatry: Towards a Critical, Patient-Oriented Approach*, 7, 117-131.
- Tom, K. A. (2012). *Measurement of teachers' social-emotional competence: Development of The Social-Emotional Competence Teacher Rating Scale*. Dissertation submitted for the degree of Doctor of Philosophy. University of Oregon.
- Triliva, S., Anagnostopoulou, T., & Vleioras, G. (2014). Sensitizing children to the social and emotional mechanisms involved in racism: A program evaluation. *International Journal of Emotional Education*, 6 (2), 3-20.
- Triliva, S., & Poulou, M. (2006). Greek teachers' understandings and constructions of what constitutes Social and Emotional Learning. *School Psychology International*, 27 (3), 315-338.
- Tsigkaropoulou, E., Douzenis, A., Tsitias, N., Ferentinos, P., Liappas, I., & Michopoulos, I. (2018). Greek version of the Connor-Davidson Resilience Scale: Psychometric properties in a sample of 546 subjects. *In Vivo (Athens, Greece)*, 32(6), 1629-1634.  
<https://doi.org/10.21873/invivo.11424>
- Ungar, M. (2018). Systemic resilience: Principles and processes for a science of change in contexts of adversity. *Ecology and Society*, 23, 1-17. <https://doi.org/10.5751/ES-10385-230434>
- Wald, J., Taylor, S., Asmundson, G. J., Jang, K. L., & Stapleton, J. (2006). *Literature review of concepts: Psychological Resiliency*. British Columbia University.
- Wells, M., Avers, D., & Brooks, G. (2001). Resilience, physical performance measures, and self-perceived physical and mental health in older Catholic nuns. *Journal of Geriatric Physical Therapy*, 2012(35), 126-131. <https://doi.org/10.1519/JPT.0b013e318237103f>
- Yada, A., Bjorn, P. M., Savolainen, P., Kyttala, M., Aro, M., & Savolainen, H. (2021). Pre-service teachers' self-efficacy in implementing inclusive practices and resilience in Finland. *Teaching and Teacher Education*, 105. <https://doi.org/10.1016/j.tate.2021.103398>
- Zagkas, D. G., Chrousos, G. P., Bacopoulou, F., Kanaka-Gantenbein, C., Vlachakis, D., Tzelepi, I., & Darviri, C. (2023). Stress and well-being of Greek primary school educators: A cross-sectional study. *International Journal of Environmental Research and Public Health*.  
<https://doi.org/10.3390/ijerph20075390>