


Article

A Contagious ... Smile! Training Emotional Skills of Adults with Intellectual Disability in the Time of COVID-19

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Abstract: The COVID-19 emergency has had important implications not only for physical but also for psychological well-being. This is particularly true for fragile populations such as people with intellectual disability (ID), who are particularly at risk of suffering during uncertain times. The goal of this action research was to design, implement, and test the efficacy of emotional competencies training to support people with ID in coping with stressful events. For this purpose, eight adults with ID followed a 5-week training of increasing complexity, aimed at exercising different skills through group activities. We designed a study to test its feasibility and efficacy, using both quantitative and qualitative methods. The analyses revealed that, after the training, participants used a more complex emotional language and were able to frame their perception of COVID-related threat with greater confidence and awareness. These findings, although circumscribed, respond positively to the urgent need to develop emotional support programs targeted at people with ID.

Keywords: intellectual disability; emotions; COVID-19; training; creativity; cooperation; group



Citation: Vanutelli, M.E.; Grieco, A.; Comelli, E.; Lucchiari, C. A Contagious ... Smile! Training Emotional Skills of Adults with Intellectual Disability in the Time of COVID-19. *Educ. Sci.* **2023**, *13*, 149. <https://doi.org/10.3390/educsci13020149>

Academic Editors: James Albright, Haisheng Pan, Xinqiao Liu, Geng Wang and Wenjuan Gao

Received: 15 November 2022

Revised: 19 January 2023

Accepted: 26 January 2023

Published: 31 January 2023



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1. Introduction

1.1. COVID-19 and Intellectual Disability

The health emergency linked to the spread of the COVID-19 has had and continues to have important global implications, leading to more than 750,000,000 cases all over the world [1]. The health impact of the pandemic is even greater for some fragile populations, including people with intellectual disability (ID). For example, the results reported by the largest study on the effects of COVID-19 on ID highlighted that people falling in this category were 2.75 times more likely to die after the initial diagnosis [2]. A subsequent cross-sectional study [3] showed that having an ID was, after age, the strongest independent risk factor for a COVID-19 diagnosis and mortality.

However, in addition to the immediate effects of the pandemic on physical health, important social and psychological consequences have been observed over time. Indeed, the feeling of uncertainty, the fear of contracting the virus, and social isolation have also impacted mental well-being and the possibility of receiving social support [4–7]. People with ID were particularly exposed to these threats. For example, a quasi-experimental study ran in The Netherlands [8] demonstrated that, after the imposition of lockdown measures, the number of reported adverse events increased, especially those involving aggression. Moreover, a qualitative study using semi-structured individual interviews revealed three main themes around the impact of COVID-19 on people with ID [9]: first, the lack of physical contact and the proximity of loved ones; second, the changes of routines due to being housebound; and third, the presence of difficulties in understanding the preventive measures. As already pointed out by Courtenay and Perera [10], cognitive impairments can limit understanding of rules, making the charge on the caregivers even greater.

Different studies highlighted the impact that all these difficulties had on family caregivers, revealing a high prevalence of depressive symptoms [11], stress, and other mental

issues [12,13]. Moreover, Bailey and colleagues [14] found that informal caregivers often experienced reduced social support to face change in routine plans, but also the exacerbation of behavioral problems. In addition, parents and proxies are often elderly and then need to be considered frail themselves [15].

In Italy, care assistance can be provided in support of families by socio-educational centers, which in many cases constitute one of the few opportunities for adults with ID to get together. The suspension of activities due to lockdowns has deprived users of the opportunity to engage with their peers in both structured and unstructured social-educational activities. The breakdown of routines and sociality can have a serious impact on fragile people's quality of life [16] due to the loss of other meaningful and purposeful activities [17,18].

However, scientific studies have shown that, despite the difficulties outlined above, in some cases people with ID were still able to maintain a good level of social satisfaction during the pandemic through the use of technology [16], highlighting the importance of digital support to maintain social contact. Additionally, no differences between evaluations before and after the COVID quarantine were found by Bailey and colleagues [14] in terms of parental psychological distress, life satisfaction, or behavioral problems. Nevertheless, these may not represent the case of people with more severe ID with lower levels of personal autonomy or greater impairment of the emotional-relational sphere. It has been suggested that the level of emotional development correlates with the severity of ID [19].

1.2. Emotions and Intellectual Disability

Although some studies have shown that children with ID exhibit emotional competencies comparable to their peers, they usually considered rather basic competencies, such as assessing the dimensions of valence and arousal [20]. When, instead, more complex competencies are involved, children with ID manifest some difficulties [21,22] that can persist through adolescence [23,24] and adulthood [25–27]. A review by Scotland and colleagues [25] highlighted that, compared to control groups with typical neuro-development (TD), adults with ID displayed relevant impairment on at least some of the tasks.

To contextualize the emotional impairment of people with ID, two hypotheses have been proposed: the first, the specificity hypothesis, argues that the difficulties shown in the emotional sphere cannot be solely explained by cognitive deficits, and therefore they represent a specific issue [28]. The second, on the other hand, argues that because some basic skills are intact, difficulties emerge as cognitive demands increase [29]. Empirical research has not arrived at conclusive results, but it appears that difficulties, with different degrees of severity, are often present even in the case of fairly simple tasks [26].

Additionally, it has been demonstrated that the difficulties experienced by people with ID in the emotional domain, and especially in interpreting self and others' emotions, can be linked to negative experiences in the relational field [21,30]. On the other hand, a proficient development of emotional skills is associated with better social interactions with peers [23,31]. Additionally, it has been proven that affective states have a significant impact on some cognitive capacities, such as attention [32].

Although little research has tested the efficacy of specific training in emotional competencies, it has been shown that they can lead to significant benefits and improvements [33] for children [34], adolescents [35–37], and adults [38–40]. These programs tested different components, ranging from emotional recognition [34], emotional expression, emotional intelligence, and social-emotional learning by using heterogeneous techniques, such as discrete trial training methodology, computer-assisted procedures, dialectical behavior therapy, and drama therapy. Typically, the chosen setting is the group and in only some cases it involves individual settings.

For example, recent research by Adibsereshki and colleagues [37] explored the effects of emotional intelligence training on the adaptive behaviors of adolescents with ID as measured with The Vineland Adaptive Behavior Scales (VABS). The analyses showed

that after 22 sessions there was a significant improvement in VABS scores, proving that emotional competencies can be exercised with proficient outcomes.

1.3. Aims and Hypotheses

In our previous experience in special educational settings, we demonstrated the existence of a relationship between emotional, cognitive, and creative skills in people with ID [41]. Leading our research in a multi-disciplinary team in collaboration with a socio-educational center, we have developed the hypothesis that working on the emotional dimension can have a wide positive impact on the quality of life of people with ID. Indeed, increasing the ability to cope with negative emotions could not only increase subjective well-being but also improve relational competencies and cognitive performance.

However, to our knowledge, no previous studies used cognitive-led training targeting multiple skills in an ecological setting, nor have they adopted this perspective using a systematic approach based on scaling training that can be tailored to the user's ability. This is important to us since, within the group, everyone can benefit from the contribution of all members.

Thus, we developed a training program that could be used in this peculiar setting, intending to test its feasibility and validity during a very emotionally demanding period, such as the one we experienced during the COVID-19 pandemic. We aimed to (1) evaluate the emotional impact of the COVID-19 pandemic on this group of people and to (2) test the feasibility and effectiveness of cognitive-driven emotional training. Finally, we wanted to (3) verify if similar training could help develop specific competencies to cope with the COVID-19 situation, and how these could change how participants perceive the pandemic threat.

We expected:

- (1) To find a feeling of fear and isolation before the training program;
- (2) That the training could be effective in encouraging cognitive reappraisal of emotional experiences. In detail, we predicted participants would report experiencing less negative emotion, particularly fear, and to improve their ability to express feelings freely.
- (3) To observe a new feeling of support and higher awareness after the training.

2. Materials and Methods

2.1. Participants

Eight adults with ID, five men and three women ($M_{age} = 33.13$; $SD = 10.02$) who refer to an Italian socio-educational center of the social cooperative society Arché Onlus (Inzago) took part in the research. The diagnosis of ID for all participants was made following neuropsychiatric evaluation by the dedicated regional services. Access to the service occurs voluntarily after the age of 18. Inclusion criteria for the present research were: (1) diagnosis of intellectual disability (based on ICD criteria); (2) consent to participation by the legal representatives and the participants; (3) full-time access to the facility. Exclusion criteria were: (1) insufficient language skills to understand verbal instructions and interact with trainers and peers; (2) insufficiently stable attentional skills (sustained attention deficit) to warrant test administration or participation in the training program sections (at least half an hour); (3) presence of very severe intellectual disability ($IQ < 35$); (4) presence of other medical conditions that adversely affects attention or behavioral control (e.g., non-collaborative behavior).

All participants were right-handed. They all had normal or corrected-to-normal visual acuity. Participants and their legal representatives have been informed of the research procedures and purposes. The study was conducted with the understanding and written consent of each legal representative according to the Declaration of Helsinki and with approval from the Ethical Committee of Università degli Studi di Milano (Protocol code: 1722).

2.2. Instruments

2.2.1. Assessment of Emotion

Test of Emotion Comprehension (TEC): The TEC [42] was devised to assess the development of the nine components of emotion, from recognition of facial expressions to understanding moral emotions. For the present study, we used the Italian version of the tool [43]. It consists of a picture book composed of 23 cartoon scenario boards and is available in both male and female versions. For the first five boards, the task is to identify the correct facial expression corresponding to the target emotion, selecting one option from among four possible choices. The following boards depict a story represented at the top of the page whose main character's face has been left blank. The task here is to select the appropriate emotion for the story character from among four choices placed at the bottom of the page, based on the story read by the examiner. There is a subtotal score for each component, and a global score (which ranges from 0 to 9), which represents the acquisition of the nine components [44]. Even if the test is conceived for children, we chose it considering the mental age of our participants and its ease of administration. We could not find a simple test to assess emotions in adults whose degree of difficulty is consistent with our sample. In any case, the scenarios were not presented childishly, so we believed the items to be appropriate and familiar to our participants.

Emotion Visuo-analogical scale (VAS): A visual-analogic scale was created by taking inspiration from the Positive And Negative Affective Scale for children (PANAS-C; [45]). The scale was composed of 16 items selected from the original 27: four related to joy, four related to fear, four related to anger, and four related to sadness. All unnecessary or too difficult items have been removed. The participants were asked to indicate how often they felt each emotional state within the past 2 weeks by using a simplified Likert scale with just three steps (never, sometimes, often). Such amendments were designed and implemented to ensure adequate understanding of the participants.

Levels of Emotional Awareness Scale for Children (LEAS-C): The LEAS-C [46] is the adapted version of the LEAS [47] applied to developmental populations. We chose this version after carefully considering the mental age of our participants and their knowledge of everyday situations. For the present study, we used the Italian version [48]. The scale includes 12 scenarios that describe imaginary everyday situations. The participants are asked to describe the emotions that they and a hypothetical person could feel in that situation. The scoring is intended to assess the complexity of emotional awareness, which is organized in five levels, from the description of somatic features to a more complex emotional awareness (e.g., the inclusion of ambiguity and the presence of distinguished emotional state of the two characters). Then, two different scores are calculated: self-awareness scores and other-awareness scores, which can range from 0 to 48. The third index, the total awareness score, can reach 60. To score participants' responses, the glossary of emotion words was used.

Drawings: Participants were asked to draw a picture on a sheet representing their actual ideas and feelings about the pandemic and the coronavirus. They could use the sheet in every orientation, and choose among pencils, colored pencils, and markers. No time limit was given to allow participants to express themselves as freely as possible.

2.2.2. Appreciation Survey

To investigate the participants' appreciation and appraisal of the activities proposed during the emotional training, a simple and short survey was created. It included four questions that were read to the participants individually: "How much did you enjoy the emotion training?"; "How much did you enjoy working in groups with your peers?"; "Do you feel you learned new things?"; "Would you like to do similar activities in the future?". To answer these questions, they could use a 6-point Likert scale ranging from "Not at all/Any", to "Very much". The scale was accompanied by a visual-analogic scale with emojis representing different emotional expressions in ascending order. The participants could either point to the chosen emoji or answer the question using a verbal label.

2.2.3. Training Program

The training program consisted of five 90-min weekly sessions. Each session was typically composed of three 30-min activities. Participants were divided into two small groups due to safety guidelines. One group received the training in the morning, and the other one in the afternoon. Two professionals, a psychologist, and an educator conducted the sessions. The topics of the sessions were intended to train different aspects of emotional awareness in ascending order of complexity. The demands concerning interpersonal engagement have also been adjusted, starting with more structured activities, and progressively creating more opportunities for cooperation and negotiation. The activities included psycho-educational techniques, among which were group brainstorming, competitive games in teams, and individual tasks, as well as different expressive modalities such as cognitive tasks, painting exercises, role-playing, use of recycled materials, storytelling, construction of small objects (puppets, boxes...), and simple experiments. Some activities were taken from specialized books, while others were invented by the trainers based on participants' needs and interests.

The first session was called "The ABC of Emotions" and was intended to define emotions and frame the topic. The first activity was a team game: the participants, subdivided into two teams, were required to locate the sensations read by the trainers (itching, anger, tingling, shame, and chills) in the body or heart using colored dots and pasting them on the board; (see Di Pietro and Dacomo, [49] (pp. 53–54)). The second activity was another team game aiming at differentiating emotions among those which make one feels good or bad (taken and modified from Di Pietro and Dacomo, [49] (p. 57)). The trainers read hypothetical scenarios and the participants, in teams, had to categorize them by placing the tokens on the board. The third and last activity was an individual task: participants received a photocopied sheet representing a Mandala in black and white (see Di Pietro and Dacomo, [49], (pp. 61–62)). In the center are little petals on which they could pin people, hobbies, or values that make them feel good, and then color the drawing.

The second session was intended to explore the spectrum of emotions, and was, thus, called "The Rainbow of Emotions". The session started with brainstorming about the different kinds of emotions. Then, the second was a handicraft activity. Participants were given a completely white shoebox that they had to customize. On the lid, they had to write their name, and on each side, they had to take inspiration from the four principal emotions previously analyzed (anger, fear, sadness, and joy). They could use tempera to identify kindred colors or glue paper figures that had been previously cut out from newspapers and magazines. The box would then be used to collect all the materials produced by participants during the following activities. This session ended with an individual task, the production of emotion puppets by using claws, paper circles for the face, markers, wool threads, and other waste material for the hair, clothes, and other details.

The third session was intended to explore the topic of emotional intensity and was called "The thermometer of emotions". The first activity was a participatory reading: the trainers read the story of Nonimporta (similar to the English form: "Nevermind"): the protagonist suppresses feelings by hiding them in clothes without expressing them, until they burst (taken and modified from Sunderland, [50]). On the table, there are fabrics and "uncomfortable" materials (e.g., tinfoil balls) that the participants could choose and hide under their clothes to simulate the accumulation of emotions as the story progressed. A brainstorming was proposed after the activity by asking participants how they felt with all those overflowing emotions on and trying to figure out why it is important to express them with someone we trust. The second activity required participants to draw a giant thermometer on a panel and then to locate in the right position different levels of the same emotions by using emoji or photographs taken from magazines (inspired by Di Pietro and Dacomo, [49] (pp. 59–60)). The third one was an individual task: participants were given a photocopy with drawings (from Sunderland, [50] (pp. 42–43)) that depict, in black and white, natural disasters or fantastic creatures to represent how they may feel when

emotions are too strong (storm, stormy sea, and monster). They could choose their favorite one(s) and complete it with color.

The objective of the fourth session was to understand that it is possible to feel several different emotions at the same time, as well as ambivalence or the need to hide emotions or replace them with other ones (“The Collage of Emotions”). For the first activity, the trainers showed an ambiguous figure (Two-Faced Janus: taken from Di Pietro and Dacomo, [49], (p. 64)) asking if it was happy or sad. After a brief brainstorming session, everyone received a Two-Faced Face card, chose whether to use it faced up or down (sad or happy), and colored it, indicating who the character was and why they felt that emotion. In the second activity, named “The Emotional Potion”, the trainers created, advised by the participants, a potion for each emotion by choosing the right colors (with brainstorming to motivate the choice). After that, everyone received a small jar and created their cocktail by choosing the right dose of each emotion, according to how they felt at that moment.

The fifth and final session aimed to understand that emotions derive from thought and that by acting at the level of thought it is possible to modify them, adopt other points of view, and find solutions (“Managing emotions”). The first activity consisted of a team game: the trainers pasted on the board four icons representing: FACT—THOUGHT—EMOTION—RESPONSE (inspired by Di Pietro and Dacomo, [49], (p. 66)). The participants had to reorder four frames (taken from the animated film Peter Pan) following the scheme: the fact (what is happening), the thoughts (elaboration of possible strategies/how should I behave, what will I do?), the emotions (what do I feel?), the choice (do I respond appropriately?). The second activity was another team game similar to the Goose Game (from Di Pietro and Dacomo, [49]). In two teams, participants had to roll dice, draw a card, and answer questions about hypothetical emotional situations. The last activity consisted of group sharing: The workshop ended with participants picking and placing a shell in a common jar communicating to others something that made them happy.

2.2.4. Procedure

The action research was conducted through a mixed-method design involving both a quantitative and a qualitative approach. The combination of these two methodologies was discussed within the research team and proposed to ensure both explicit and implicit measures. This choice was made mainly for three reasons. First: considering participants’ different levels of language skills (although considered appropriate for an adequate understanding of all the assessment tools), it was important to also offer non-verbal tasks to assess their emotional states. Second, we wanted to exclude a possible effect of complacency on the researchers in the face of direct, verbally posed questions. In the case of implicit measures (drawings), the free expression of the participants without a specific request (except the theme to be represented) allowed for a more authentic reading of their meanings. Third, it was important for the whole team to assess individual differences in the approach towards the COVID-19 pandemic and, in general, the coping attitudes to planning targeted activities within their educational path.

For the quantitative analyses, validated tools have been selected that were appropriate for the participants’ mental age (see Section 2). When needed, they were associated with integrative, simplified materials (such as emoji in the case of Likert scales) that ensured adequate understanding. The scoring was conducted by a psychologist who was not aware of the experimental condition (pre vs. post-training performance).

The qualitative analysis was conducted following a phenomenological approach. The applied operational model is the “Polysemeiotic Model” (Modello Polisegnico, [51]). For each drawing, a report was produced considering the graphic elements in the paper (see also [52,53]). In detail: line (tract, pressure, pattern); materials (tempera, pencils, chinks, watercolors, collage, mixed technique); shape (open/closed, round/edged); space (high/low, left/right, empty/full, perspective, direction, crowding, balance, articulation); color (warm/cold, light/dark, contrasts, black/white, saturated/unsaturated). A certi-

fied art therapist not aware of the aims of the research and not involved in it evaluated the drawings.

To assess the effectiveness of the training we compared each participant's pre- and post-training performances (within-subject design) on both qualitative and quantitative measures.

3. Quantitative Analysis

Results and Discussion

To investigate the presence of improvements after the training program in the performance of the quantitative tests (questionnaires and tests), we performed Wilcoxon Signed-Rank tests for all eight dependent variables: four for the emotional components of the VAS, one for TEC score, and three for LEAS (self-awareness, other-awareness, total score). The analyses identified three significant results about LEAS-C self-awareness ($p = 0.027$), other-awareness ($p = 0.027$), and the total score ($p = 0.046$), with all variables improving after the training program (SELF_{pre}: $M = 32.86$; $SD = 7.86$. SELF_{post}: $M = 37.29$; $SD = 6.47$. OTHER_{pre}: $M = 29.29$; $SD = 8.83$; OTHER_{post}: $M = 37.57$; $SD = 6.55$. TOT_{pre}: $M = 34.71$; $SD = 7.87$. TOT_{post}: $M = 38.71$; $SD = 6.02$). No significant differences have been found between self- and other-related scores, neither within pre- nor post-assessment (see Figure 1).

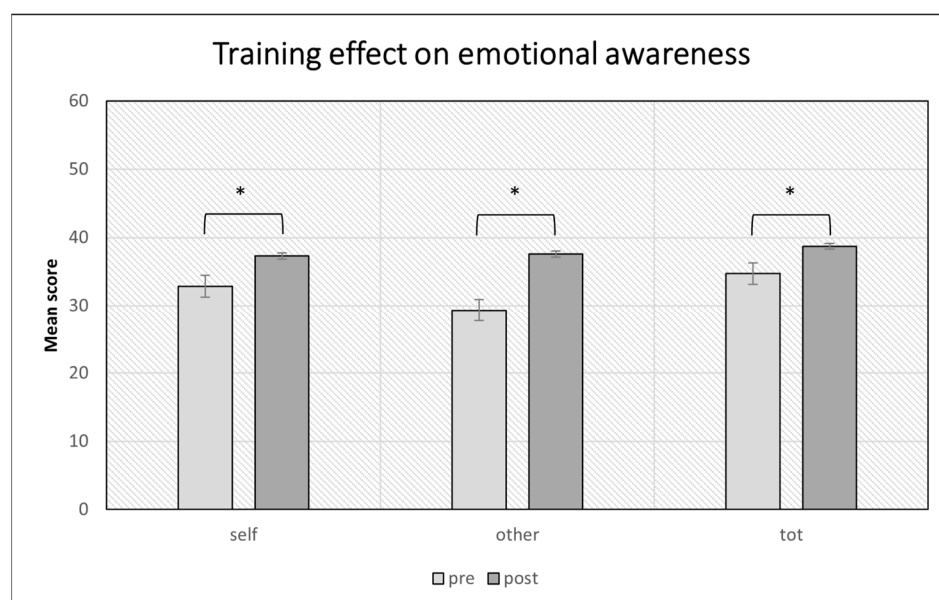


Figure 1. Histograms representing mean scorings at the LEAS-C for self, other, and total subscales as assessed during pre- (white) and post-training (grey) assessments. The data show significant improvements in the three measures after the training.

Moreover, the analyses highlighted two results close to statistical significance: TEC scores ($p = 0.058$) were higher after the training program (TEC_{pre}: $M = 4.75$; $SD = 2.12$. TEC_{post}: $M = 6.38$; $SD = 0.74$), while the self-assessed scores of fear with the VAS ($p = 0.074$) were lower after the training program (FEAR_{pre}: $M = 2.63$; $SD = 2.13$; FEAR_{post}: $M = 1.38$; $SD = 1.6$).

Finally, data from the Appreciation Survey were considered to assess participants' liking of the activities, which could be useful to plan future activities. None of the participants answered "Not at all/Any" or "Little" to any of the questions. The "Very much" answer obtained 62.5% of the votes in Question 1 (Q1: "How much did you enjoy the emotion training?"), 75% in Q2 ("How much did you enjoy working in groups with your peers?"), 50% in Q3 ("Do you feel you learned new things?"), and 100% in Q4 ("Would you like to do similar activities in the future?"). See Table 1 to see the results for each question.

Table 1. Percentage of participants who rated the various levels of the Likert scale for each of the proposed questions.

| Question | Answer | | | | | |
|---|------------|----------|-------|--------|-------|-----------|
| | Not At All | Not Much | So-So | Enough | A Lot | Very Much |
| How much did you enjoy the emotional training? | 0% | 0% | 0% | 12.5% | 25% | 62.5% |
| How much did you enjoy working in groups with your mates? | 0% | 0% | 12.5% | 0% | 12.5% | 75% |
| Do you feel you learned new things? | 0% | 0% | 0% | 12.5% | 37.5% | 50% |
| Would you like to do similar activities in the future? | 0% | 0% | 0% | 0% | 0% | 100% |

The quantitative analyses highlighted the presence of a significant improvement in participants' emotional awareness. Indeed, results showed higher scores in all three indices of LEAS-C, related to both self and other-related awareness of emotions. Higher scores suggest more sophisticated mindreading and the ability to infer and verbally express the characters' emotions. This result is particularly meaningful since it could indicate that the training program was effective for the participants, who showed to be more aware of their and others' emotions. This is in line with the results obtained by previous research. For example, Adibsereshki and colleagues [37] found that, after a program based on a computerized emotional intelligence group training, communication and social skill competencies were significantly improved. The development and/or improvement of such competencies can reinforce the capacity to make sense of ones' own thoughts and behaviors, and possibly a more proficient regulation of emotional states. At the same time, enhanced abilities to interpret the emotions of others can provide an important tool for understanding others' intentions and behavior, thus empowering solving problems, conflicts, and ambiguous management. Additionally, our results seem to indicate an improved capacity to discriminate between our own and others' feelings, which may suggest the presence of other important skills, such as perspective-taking. Finally, these improvements are observed in the context of an abstract task, which requires participants to use their imagination, without any concrete visual aids, such as photos or drawings, or actual events for which they could have used their experience. All these skills are particularly relevant for our participants since an important cognitive impairment is present besides the emotional difficulties.

Two interesting tendencies that did not reach statistical significance deserve attention because they could inform future research and intervention. The first one refers to TEC scores, which were improved after the training. In detail, before the emotional activities, the participants demonstrated less than five competencies ($M = 4.75$) out of nine. After the training, they gained more than one extra skill on average ($M = 6.38$). Additionally, considering the VAS assessment, coherently with our hypotheses, fear is the most permeable to the effects of training, even if our results did not reach a statistically significant level. This point is nevertheless relevant in that it not only supports the efficacy of the training, but it also proves that the training program was pertinent to the difficult period they were experiencing and thus was actually needed. We suppose that setting a non-judgmental and safe space could have provided proficient support, reducing the sense of fear. However, one could argue that the fear scores were reduced because the situation improved over time and participants felt more secure. Even if it were plausible, we excluded this possibility since participants had already resumed routines more than a couple of months before, and the training lasted little more than a month, so they were rather used to the new procedures.

Nonetheless, although these findings are vital since they contribute to demonstrating the efficacy of our training, it is equally important to analyze the individual outcomes. Indeed, participants exhibited unique and differential characteristics. Considering LEAS-C scores first, it is worth noticing that some showed a marked difference between self and other-focused emotional competencies, while others had comparable performance in

the two domains. Interestingly, although all participants showed improved performance, people who started at a lower level often manifested substantial gains (e.g., 25 to 40 points before and after the training). Similarly for TEC, considering each participant more in detail we can observe that in some cases the performance in identifying emotional components increased from 2 to 7 or 3 to 7 skills, highlighting a gain of 4 or 5 extra competencies. Indeed, also in this case, participants who started with lower scores in emotional understanding demonstrated a huge increase in performance, while those who started with higher scores exhibited more moderate gains.

With regard to the fear scores, three participants in detail displayed a significant decrease in fear assessment, dropping from 6 to 3, from 5 to 2, and from 3 to 0. In one other case, on the other hand, there was a slight increase in anger and fear scores and a substantial increase in sadness scores. In this case, considering the participant's background and emotional competencies, the educators and the researchers have concluded that such an increase could result from a greater willingness to embrace and acknowledge emotions, and a greater openness to their feelings. Moreover, they demonstrated much interest in the training program and were very enthusiastic about the idea of participating in similar activities again in the future, so we believe the experience was meaningful and proficient.

All these findings derive from the choice of operating within groups that are rather heterogeneous in terms of cognitive and emotional skills. This choice, while aimed at greater social inclusion and fruitful exchange between individuals with different characteristics, can certainly account for the observed effects. On the other hand, they reveal how starting skills affect the outcome of a training program and suggest the importance of educators and therapists in developing tailor-made pathways and activities.

4. Qualitative Analysis

Results and Discussion

The phenomenological evaluation of the drawings by the art therapist permitted the identification of some recurring topics of interest about participants' perception of the COVID-19 pandemic.

The first aspect (1) is about the presence of a shift from a representation of closed or semi-closed circular shapes containing different elements to the realization of subjects free from containers (see Figures 2 and 3). This choice seems to indicate an emotional change from a state of need for protection and isolation to one of greater trust in the environment and relationships (Participant02, Participant03, Participant04).

The second element (2) concerns the presence of a change in the representation of the Coronavirus (see Figures 4 and 5). It shifted from an approximate description to a sharper and more defined one, as if the training program had given the participants the possibility to develop greater awareness of what is happening and what it arouses in themselves (Participant01, Participant02).

A third point (3) reflects the presence of a change in the structuring of space. We observe a shift from the presence of graphic elements that block, to their disappearance in the next phase (see Figures 6–8). Thus, we can hypothesize a change in feelings: from the sensation of being blocked by the health emergency to one of greater awareness of the danger, but with a possibility of managing it without feeling merely stuck and powerless (Participant05, Participant06, Participant07).



Figure 2. Drawings of Participant03 during pre- (**top**) and post-training (**bottom**) assessment. In the first drawing, they create a human figure within a structure that contains it. The same character merges with the lines of the structure, giving the impression of being stuck in the lines and shapes above. In the second work, they draw two people without protection around, still filling the entire space, which, however, is less confusing. In both works, a shape (possibly a mask?) hides the mouth of the figure, that in the second work is much more evident. The message here is: “I unlock myself”.

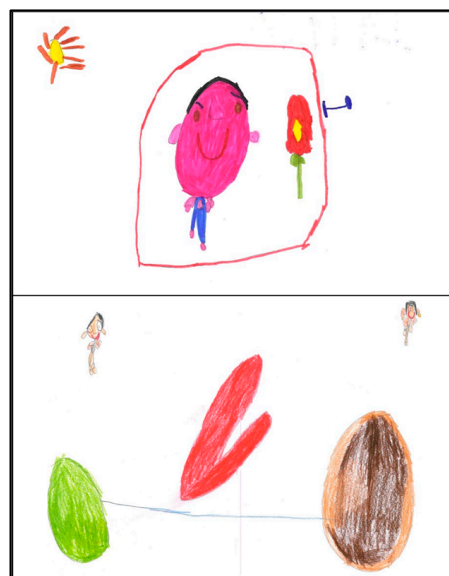


Figure 3. Drawings of Participant04 during pre- (**top**) and post-training (**bottom**) assessment. Here, we observe a shift from the presence of a container (circle/house) to the absence of containers and the freedom of the figures placed in an organized way. There is also a transformation in the representation of the relationship, which moves from a contained bond to a relationship that does not need protection. The message in this case seems to be: “I can go out without getting lost”.



Figure 4. Drawings of Participant01 during pre- (**top**) and post-training (**bottom**) assessment. In the first work, they draw a circle within other patches of color that create a sort of frame with an opening at the base. In the second work, they reproduce again a circular shape in the center of the sheet, but much better defined, with eyes, nose, and mouth: an animated shape. Another colored circle appears, with a very strong stroke that completely isolates the figure inside. While in the first work on the central element barely features a facial expression of fear, in the second drawing the expression is sharp, the mouth has downturned corners, and is starry-eyed. The message is: “I set you up ugly COVID!”.



Figure 5. Drawings of Participant02 during pre- (**top**) and post-training (**bottom**) assessment. The first drawing presents concentric circles that occupy most of the space of the sheet. At the center of the concentric circles, we find small elements that are also circular. We can see how the stripes of color repeated on the sheet seem to be barriers to the central body. In the second drawing, they create something quite opposite. Of the previous concentric circles, just one remains to represent a face. Here we perceive a feeling of clarity, sharpness, and stability even though there are no supporting planes for the figure. The message could be: “It is all clearer now”.

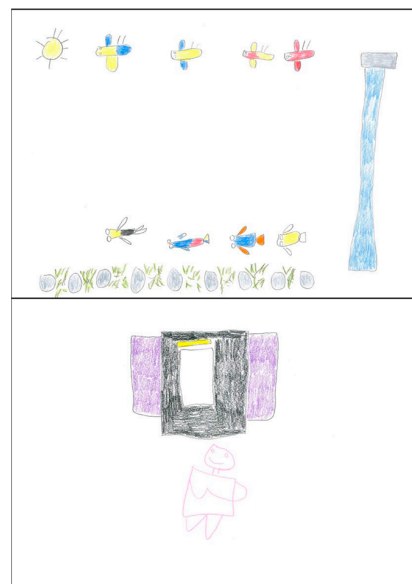


Figure 6. Drawings of Participant05 during pre- (**top**) and post-training (**bottom**) assessment. Before, they draw some elements: fluctuating figures at the top and the bottom of the sheet, almost as if to create a frame. On the right, there is a rectangle that closes the space. In the second phase, a closed figure appears in the center of the sheet above a human figure who appears unaware of the heavy structure that hangs above. In the first drawing, the block on the right side suggests a difficulty in glimpsing the future and the possibility of going only towards the past (all the figures are turned left). In the second work, there are no side blocks. The looming of something heavy above the head of the character is evident, centered in the sheet. The message is: “I am present in what happens”.



Figure 7. Drawings of Participant06 during pre- (**top**) and post-training (**bottom**) assessment. First, they draw rectangles that delineate the space to the left as if to categorically block the movement of the central cell. The sun and the colored rectangular shape also act as a block. Framed and blocked in the center of the support there is a suspended circular form with other circular and oblong elements inside. In the second work, two human figures appear beside a large circle. It looks like a figure born from the fusion of the sun and the previous cell as if they had merged, giving rise to a new shape that is disturbing and dangerous for people nearby. The colors are dark and cold like the elements inside the first circle/cell, but the shape is that of the first sun. Thus, in this case, we could perhaps support the hypothesis of a shift from a graphic representation of control of the cell/circle to a representation of a dangerous situation for oneself and one’s loved ones, which is no longer controllable. The message is: “I can’t help it”.



Figure 8. Drawings of Participant07 during pre- (**top**) and post-training (**bottom**) assessment. In the first work, they draw a house, a tree, three people, and geometric figures at the top of the sheet. The latter looms menacingly over the heads and roof of the house. In the second work, they draw two people, a house, a flower, and a large sun at the top. The structure changes little, although in the second work the figures at the top disappear and a large bright sun appears, looking less dangerous than the geometric figures in the first drawing. The message is: “I am less scared”.

Finally (4), it is interesting to note a change in the drawings from the presence of several elements, some of which are about each other, to the absence of them or the persistence of only one of them (see Figure 9). This step could suggest the creation of a space where one can experience an increased sense of isolation and especially sadness contextual to the pandemic (Participant08).



Figure 9. Drawings of Participant08 during pre- (**top**) and post-training (**bottom**) assessment. In the first work, there are several graphic elements: the building with the cross, the ambulances, and flying elements of the same color as the building. Everything is suspended, colored with markers, and cold colors prevail. In the second one, there is only one element, placed at the center of the defined support and leaning on the floor; therefore, it is more stable and more realistic. The entrance door appears, which was not there before. Around the structure with the cross on top, there is nothing. It suggests a sense of loneliness, emptiness, and sadness, and all other elements disappear. There is a shift from a representation of several elements concerning each other to a work made up of an isolated element in the center of the paper. The message is: “I am sad”.

A previous qualitative study used semi-structured individual interviews to investigate the impact of COVID-19 on people with ID [9] and highlighted three main themes that are compatible with our analyses. The first is the lack of physical contact and the proximity of the loved ones. The presence of this theme is suggested in our study by the use of closed or semi-closed circular shapes, which have been interpreted as the need for protection and isolation. The second is the forced changes to everyday routines due to the lockdown. In the present research, this topic was conveyed by the presence of looming elements and the sensation of being blocked by a health emergency. Third and finally, the presence of difficulties in understanding the preventive measures which are, in our case, represented by an approximate description and definition of the coronavirus, which was interpreted as a lack of awareness of the situation.

5. General Discussion

The combination of quantitative and qualitative analyses allowed us to draw general considerations about the group as well as personalized indications to guide future educational work. Additionally, it permitted us to answer our research questions. The first question (What is the emotional impact of the COVID pandemic on this group of people?) can be answered by quantitative and qualitative data. The first suggested the presence of a high level of fear before the training program, which is reflected by the second through the use of graphic elements in the drawings that suggest isolation, danger, and the need for protection. The second research question about the efficacy of the training program was addressed, mainly by the quantitative analyses and the results at the LEAS-C, which highlighted the use of more complex emotional language after the training program, considering both self- and other-perspectives. The third question (How can the training modify the perception of the COVID-19 threat?) was addressed mainly by the qualitative analyses, which underlined that after the training program, the drawings were characterized by new elements suggestive of higher confidence (less need for protection; 1) and awareness (2, 4) about the threat, together with a more free emotional expression (3).

Interestingly, when looking at single outcomes, there is a parallelism between the emotional state profile as assessed by the quantitative tools and the drawing construction. For example, the participant representing a desolate scenario of the pandemic after the training was also the one who experienced higher negative feelings.

6. Conclusions

The present study aimed to assess the efficacy of a mixed-method approach to both assess and empower emotional skills in a small sample of adults with ID who attend the activities proposed by a socio-educational facility. The study was conceived in a specific historical moment, that is, the COVID-19 pandemic, with the idea of providing adequate support and tools to a group to manage the uncertainty and the difficulties related to the restrictions and changes in everyday life. Adults with ID represent a population rather neglected from the psycho-educational point of view and especially by institutions. We believe, however, that, particularly in this delicate period, it is essential to direct interventions that encourage the support of specific skills to deal with uncertainty, to implement group cohesion, cooperation, and sharing of feelings with others.

The emotional training program, based on a cognitive approach and led with creative methods, was made up of many different techniques and covered emotional topics and skills with an increased level of complexity. The comparison between the quantitative assessment before and after the training program allowed us to appreciate the effectiveness of the training, highlighting the presence of empowered competencies, especially in emotional awareness, revealing a more complex use of the emotional lexicon. At the same time, the analyses revealed a wide heterogeneity in the outcomes, which was better highlighted through a phenomenological analysis of the drawings of participants' representation of coronavirus.

In light of these results, we believe that our study, although limited to a small setting, may have important implications for developing future research. Of course, it is not free from limitations. Although well characterized, the sample is modest to ensure the generalizability of our data to the entire ID population. However, considering the variety and heterogeneity of this specific population, it would be a very ambitious aim even with a larger sample. We believe that, by extending methods and practices to real ecological contexts, it would be possible to further prove, assess, and challenge methodology both from us and other researchers in the field.

Despite these criticisms, the research presents many aspects of innovations. First, it proposes an innovative and effective training program in emotional competence enhancement based on cognitive stimulation techniques through creative and expressive means [41,54]. The training program proved to be particularly popular with participants, who appreciated the playful and varied ways of leading the activities.

Additionally, it was conducted in an ecological setting, within an existing group of people who know each other and participate in the activity of the center together every day. This way, the skills acquired during the training can be continued and reinforced with the support of educators in other activities as well.

Future developments in this line of research, in addition to help increase the numerosity of the action research, could include the assessment of skills other than emotional ones, to investigate the generalization of learning to other areas, such as cognition. Moreover, they could also take into consideration educational personnel, with specific training courses on various topics of interest.

Author Contributions: Conceptualization, M.E.V. and C.L.; methodology, M.E.V.; quantitative analysis, C.L. and M.E.V.; qualitative analysis: E.C.; writing—original draft preparation, M.E.V.; writing—review and editing, C.L., A.G. and E.C.; supervision, C.L.; project administration, A.G. and M.E.V. All authors have read and agreed to the published version of the manuscript.

Funding: This research was partially funded by the Department of Philosophy “Piero Martinetti” of the University of Milan under the Project “Departments of Excellence 2018–2022” awarded by the Ministry of Education, University and Research (MIUR).

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of Università degli Studi di Milano (protocol code 1722).

Informed Consent Statement: Informed consent was obtained from all legal representatives of the participants involved in the study.

Data Availability Statement: The data that support the findings of this study are available from the corresponding author [M.E.V.], upon reasonable request.

Acknowledgments: We are very grateful to all staff members of Arché Onlus Social Cooperative (Inzago, Italy) for their contribution.

Conflicts of Interest: The authors declare no conflict of interest.

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