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Envisioning the future: a remote neuropsychopedagogic intervention for inmates

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Abstract

The pandemic has implied a massive digitalization of psycho-pedagogical and educational interventions in different contexts, including the prison setting. Patrizio Paoletti Foundation (Assisi, Italy) has created Envisioning the Future (EF), a neuropsychopedagogic program aimed at increasing personal wellbeing, that was also remotely conducted among the inmates of the Padua (Italy) prison. The program was remotely implemented from May 2021 to June 2021, at the climax of the pandemic emergency, with the collaboration of the University of Padua (Italy) and of Padua prison (Italy). Through key neuroscientific findings and daily practices for wellbeing, EF aims at increasing inmates' emotion regulation abilities. The responses of nine inmates to the Scales of Personal Self-efficacy in the Management of Negative and Positive Emotions, before and after EF, were paired and subjected to analysis of covariance, revealing an increase in the ability to manage positive emotions after EF. To date, EF is one of the first remote neuropsycho-pedagogical experiences in Italian prisons, able to positively impact on individual well-being.

Keywords: *emotion regulation, emotion, inmates, prison, pandemic, wellbeing, neuropsychopedagogy, remote education*

Introduction

According to scientific literature, inmates are more at risk than the normative population to develop depressive and psychotic symptoms, emotional dysregulation, substance abuse, and post-traumatic stress disorder (Fazel et al., 2016). Moreover, inmates often encounter difficulties in planning their future: Trommsdorff and Lamm (1980) describe the time length of incarceration as a "suspended time" because the inmates' capacity to think about their future increases only when the release date comes closer. Factors like age, time-length of incarceration, perceived social support, working, or studying within the prison, and being conjugated help inmates to reflect on their future (Carvalho et al., 2018). Inmates that have an optimistic vision of their future lives in terms of professional, educational, relationships, and family goals (Visher & O'Connell, 2012) have a minor possibility to commit further crimes (Maruna, 2001). Prisoners can see incarceration as critical occasion to change and ameliorate their selves, especially when they are engaged in the appropriate educational programs (Carvalho et al., 2018).

However, it is important to note that in the framework of Covid-19 pandemic the prison context became even more difficult to bear with. The pandemic has been depicted as "a new normality" given its massive impact on people's habits and routines (Bozkurt & Sharma, 2020) across different age groups and contexts, including the prison setting. Pandemic has led inmates to perceive higher social isolation and to have postponed the trial dates, prolonging the time length of incarceration (Hewson et al., 2020), hindering the capacity to plan their short-term and long-term future lives. In Italy, one of the first countries hit by Covid-19, inmates' rate of self-harm, suicide attempts, psychiatric disorders, and violent behaviors concerningly increased (Associazione Antigone, 2021). Promoting self-efficacy in emotion regulation can represent a crucial factor to increase inmates' wellbeing and prevent negative outcomes, especially during the worldwide sanitary emergency. The aim of the present research is therefore to investigate whether a neuro-psycho-pedagogical intervention (i.e., named Envisioning the Future, EF) could increase inmates' self-efficacy in emotional regulation by improving their ability to manage negative and/or positive emotions. In Italy, this is the first study statistically analyzing the impact of a neuropsychopedagogic intervention on inmates, providing them with theoretical and practical knowledge to ameliorate their wellbeing in the challenging context of prison.

Self-efficacy in Emotion Regulation

Self-efficacy is positively correlated to self-esteem, environmental exploration, goal-achievement, and negatively correlated with anxiety and depression (Law & Guo, 2016). On the other hand, emotion regulation is the capacity to modulate the intensity and frequency of emotional states and expressions (Perasso & Velotti, 2021). Combining the two constructs, self-efficacy in emotion regulation can be defined as the capacity to manage and control emotions (Caprara et al., 2008) with two main outcomes: (i) avoiding being overwhelmed by rage, irritation, desperation, and other negative affects; (ii)

experiencing joy, enthusiasm, pride, concerning positive events, even when the person is experiencing distressing situations. This variable can represent a peculiar resource in the challenging context of prison and Covid-19 pandemic, and it could be cultivated through neuropsychopedagogic tools.

Envisioning the future: a neuropsychopedagogic intervention for inmates

Envisioning the Future (EF), ideated by Patrizio Paoletti Foundation is a neuropsychopedagogic intervention based on the principles of Pedagogy for the Third Millennium (PTM) (Paoletti, 2008) and the Sphere Model of Consciousness (Paoletti & Dotan Ben Soussan, 2019), that was provided to inmates. In Italy, EF was previously applied to the educators of the juvenile penal justice circuit (Paoletti et al., 2022; Maculan et al., 2022) and to earthquake survivors (Di Giuseppe et al., 2023) with encouraging outcomes in terms of emotional well-being and future reprogramming in those challenging contexts. EF aims at providing participants with knowledge and tools to reprogram their brains, counteracting stress, and improve prefrontal cortex activation and coping circuits (Davidson, 2000; Fredrickson, 1998; Di Giuseppe, 2022). EF, as neuropsychopedagogic intervention (i) provides knowledge about resilient brain functioning; (ii) teaches how to use these notions in daily life to reduce stress, and improve the capacity to make sense of experience and be aware of positive emotions. In fact, one of the main purposes of EF is to provide participants with techniques and exercises they can use whenever necessary to ameliorate their lives. EF includes four blocks of lessons and exercises (see Table 1), linked to Pedagogy for the Third Millennium principles (Paoletti, 2008; Di Giuseppe, 2022): i. Block 1 (encompassing sessions 1,2,3) reflects the pedagogical principle of Observation, defined as the capacity to interrupt automatic responses and activate intentional and proactive responses to stimuli; ii. Block 2 (encompassing sessions 4,5,6) reflects the pedagogical principle of Mediation as the capacity to manage positive and negative emotions, increase self-motivation, detect meaning and purposes, following models of resilience; iii., Block 3 (comprising sessions 7-8) reflects the pedagogical principle of Translation by emphasizing the importance of human interconnectedness, self-determination, and the multiplication of learning opportunities; iv. Block 4 (including sessions 9-10) reflects the pedagogical principle of Normalization as it guides the person to proactively re-signify experience through, among other things, the practice of silence and meditation (Paoletti, 2018).

1. Focus on what you can control and make small decisions. 2.Identify an attainable, exciting, measurable goal.	Body-scan and relaxation, guided visualizations, bringing one's attention to making small decisions.

3. Several times a day become aware of your posture.	
4. Be inspired by stories. 5. Ask yourself what is really important. 6. Cultivate gratitude.	Training in self-motivation, listening to his most intimate preferences, learning to cultivate positive emotions and to manage negative emotions (e.g., gratitude), following resilience role-models, being an active agent.
7. Appreciate other as a resource, cultivate and expand your social network. 8. Cultivate curiosity.	Listening, sharing experiences, enhancing the resources of the group to cope together with events, constant learning from everything and from every experience.
9. Practice a few minutes of silence. 10. Embrace and transform: before bedtime, generate your tomorrow today.	Exercise to improve the quality of sleep, bringing attention back to the here and now, listening to the silence and to one's breath, daily and constant practice of intentional silence, proactive storytelling of daily life, self-programming and foreshadowing of the future.

Table 1. Ten sessions of Envisioning the Future

EF includes a massive body of meditation and prefiguration techniques (see Table 1), and it is one of the first interventions in Italy to bring meditation into the prison context. In terms of emotions management, it has been proved that meditation can foster a decrease in rage (Vannoy & Hoyt, 2004), aggressiveness and guilt (Sumter et al., 2006), hostility, and mood shifting (Samuelson et al., 2007) among inmates.

1.Aims and objectives

EF wants to trigger a transition from the reactive mind to the conscious mind (Paoletti, 2008): a major awareness, related to a major activation of the prefrontal cortex, can help individuals to re-signify their past and present experiences, and proactively reprogram their future. This mindset shift is critical for inmates, as a conscious mind can help them to increase their self-efficacy in emotion regulation to bear with the incarceration experience, and to rethink their lives – past, present, and future – transforming the negative emotions in hope toward the future. The present study aims at exploring the effects of EF on inmates' self-efficacy in emotion regulation,

controlling the possible interfering effects of age and time-length of incarceration. The hypothesis is that EF increases inmates' self-efficacy in emotion regulation from pre-intervention to post-intervention.

2.Methodology

2.1 The sample

The sample includes N=9 male inmates (mean age=41.56 years, SD=12.12, min=24, max=62; average years of imprisonment already served= 5.22, SD=3.89, min=1, max=13) of the prison of Padua (Italy) who voluntarily took part in the Envisioning the Future program and the related study completing an informed consent.

2.2 Procedures

Envisioning the Future (EF) was ideated by the Patrizio Paoletti Foundation, and conducted in Padua prison (Casa di Reclusione or house of confinement, a term used to define institutions hosting prisoners condemned with a final sentence higher than five years) thanks to the collaboration of Padua prison, Padua University, and the co-funding by Fondazione Mediolanum Onlus. The study obtained the approval by the University of Padua ethical committee and it took place between May and July 2021. Given the global health emergency, EF was conducted online: participants assisted the sessions from the prison's auditorium, remotely linked to EF trainers. In the auditorium, facilitators were present to gather questions and respond to participants' requests. EF encounters were led by trainers, and experts in the Pedagogy for the Third Millennium (PTM) (Paoletti, 2008). EF included four live webinars of 120 minutes each and 5 sessions of 60 minutes. In each encounter, moments of group interaction were encouraged, as well as questions and insights on the notions and techniques presented. The online format allowed Patrizio Paoletti Foundation to address the global challenge of the digitalization of psycho-pedagogical and educational interventions (Bozkurt, 2022), expanding the focus from the school dimension to other contexts where adults' and minorities' educational needs risk being forgotten.

2.3 Measures

Participants completed the Scales of Personal Self-efficacy in the Management of Negative and Positive Emotions (APEN/A – APEP/A; Caprara et al. 2008). Through 15 items, ordered on a Likert scale from 1 to 5 (1=not at all capable, 5=fully capable), these scales measure the level of personal self-efficacy in the management of both negative and positive emotions. To detect a change in the measured abilities, the scales were administered twice: at the beginning of EF (i.e., t1 or "pre"-intervention) and at the end of the program (i.e., t2 or "post"-intervention).

2.4 Analytic Plan

Descriptive analyses and Analysis of Covariance have been conducted to detect amelioration from t1 to t2 in the means of inmates at the APEN/A and APEN/P, controlling the statistical effects of age, educational level, and years of imprisonment already served, have been conducted.

3. Results

APEN/A mean score decreases from t1 to t2. However, no changes in comparison with the validated score-range emerge as the mean score in t1 and t2 remains in the medium range. Differently, APEP/A means increase from t1 to t2, passing from the medium range to the high range (see Table 2).

	Mean	**SD**	**Validated Scores**
t1 APEN/A	27,22	4,816	26-27 (medium range)
t2 APEN/A	26,56	4,720	26-27 (medium range)
t1 APEP/A	25,89	5,231	24-25 (medium range)
t2 APEP/A	26,44	4,851	26-28 (high range)

Table 2. Means of inmates scores to APEN/A and APEP/A in t1 and t2.

Analysis of Covariance (ANCOVA) reveals a statistically significant increase in the self-efficacy in managing positive emotions from t1 to t2 [$F(5)=12.73$ $p<.05$], with a significant effect of the individual's age [$F(5)=23.33$ $p<.01$]. Older participants may benefit more from EF interventions in terms of self-efficacy in managing positive emotions.

4. Discussion

Becoming more able to regulate, control, and monitor positive emotions is crucial in prison because it allows inmates to appreciate positive events, despite the contextual limitations. Importantly, positive emotions are strongly connected to resilience and the capacity to distance negative feelings (Friedrickson 1998). While emotionality is often suppressed among prisoners to conform with the majority (Laws & Crewe, 2015), positive emotions should be maximized in future interventions for inmates to: (i) foster optimism to reproject a future after incarceration (Visher & O'Connell, 2012), (ii) counteracting criminal recidivism (Maruna, 2001), and (iii) balancing negative emotions, anxiety, and stress (Fazel et al., 2016;

Baranyi et al., 2018). Plus, EF is providing participants with feasible techniques (e.g., meditation, relaxation, body scan, silence) they can use in their daily life to regulate their emotions, even after release.

The study presents three limitations: (i) the use of self-report questionnaires could generate social desirability bias in participants' responses (Dicken, 1963), possibly exacerbated by the incarceration's stigma (Le Bel, 2012), (ii) the small sample size hindering results' generalization, (iii) the lack of a control group.

Conclusion

Results show a significant increase in inmates' self-efficacy in managing positive emotions after participating in EF. This effect is linked to age: maturity seems to lead inmates to benefit more from the intervention. This is the first Italian study analyzing the impact of a remote neuropsychopedagogic intervention on inmates' self-efficacy in managing emotions, laying the theoretical and empirical ground for future research to investigate the improvement of emotion regulation in the context of prison. Promoting trainings on how the brain works and how to use these notions to ameliorate daily life, it is an innovative element for inmates' rehabilitation that should be deepened.

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