

## Chapter

# Neuropsychopedagogical Training Based on the Sphere Model of Consciousness and the Mediating Role of “the Other” to Promote Well-Being in Adolescence

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## Abstract

This chapter discusses the protective role of specific resilience-related psychological variables for healthy adolescent development in terms of increasing well-being and positive resources. The topics of self-development, emotional inter-regulation, self-compassion (sense of common humanity, self-compassion, and hyper-individualization), and resilience will be addressed by discussing the results of a pre-post study conducted in a school setting with  $N = 400$  students (mean age = 15.47;  $SD = 1.79$ ) who participated in the neuropsychopedagogical training “Envisioning the Future” based on the Sphere Model of Consciousness. Among other things, a mediation model is presented, showing that self-efficacy in managing negative emotions predicts resilience through the effect of a sense of common humanity. Thus, resilience is no longer just about not being overwhelmed by negative emotions but also about connecting with self and others. This perspective emphasizes the goal of strengthening positive relational and behavioral resources to improve well-being in the school environment.

**Keywords:** sphere model of consciousness, adolescence, neuropsychopedagogical training, school, resilience, self-development, common humanity

## 1. Introduction

Adolescence represents a complex developmental transition in which formal thinking, the ability to plan for the medium and long term, and the concepts of morality and individual and social responsibility, among others, are structured. All of these functions are experienced in an increasingly articulated social and relational environment that challenges young people’s ability to maintain adequate internal

homeostasis and levels of mental and physical well-being [1, 2]. In fact, today's adolescents face numerous challenges related not only to growth, separation processes through individuation, external world events that can be frightening, such as difficulties at school, difficulties with friends and/or family but also emergencies that disrupt daily routines (such as health related to the COVID-19 pandemic, financial instability, wars, and climate change) [3, 4].

Early detection of the risk of mental health depletion and problems in the development of the self, of a resilient self, including for the purpose of structuring preventive educational initiatives, requires reference to a broader and more comprehensive configuration of adolescence, as the age between 10 and 24 years, in line with contemporary interdisciplinary theoretical frameworks of growth and neuroscientific, cultural and social evidence related to this life stage, which helps to define the variables to be monitored [5–7]. Specifically, throughout the developmental span and especially in adolescence, the self is structured through profound changes not only at the behavioral level but also at the neurobiological level, through the definition of three specific forms: (a) the primal self (implicit self-awareness), (b) the self-concept of the identity self, and (c) the self-concept of the social self (the latter two related to the capacity for self-reflection) [8, 9]. In fact, the study of the self as a tripartite entity that begins to be clearly defined in preadolescence and adolescence is currently guiding experimental, neuroscientific, clinical, and educational studies of adolescents on the risk and protective factors in the developmental parabola of: (a) an identity self (internal process of reference to positive resources); (b) a relational self (content related to beliefs, attitudes, and behaviors); and (c) a collective self (role structure, sense of belonging to the community, and worldview) [10, 11]. Monitoring and preventive educational intervention on these factors therefore makes it possible to reduce the risk of internalizing and externalizing problems in young people related to a negative self-concept [12], also by strengthening the ability to relate to others, which inhibits the structuring of a self-centered and impulsive self, subject to identity crises, and allows future planning, the ability to cooperate and prosociality [13].

Through a preliminary review of the scientific literature, we can identify the following risk and protective factors: (a) perceived family support; (b) perceived level of stress; (c) perceived level of life satisfaction and health; (c) level of socioeconomic equity of the reference social environment; (d) presence of psychiatric diagnosis or diagnosis of physical pathology (chronic or acute); (e) detection of progressive social withdrawal or enactment of risky behaviors; (f) quality of leisure time; (g) exposure to childhood trauma; (h) perceived support from the school environment, etc.; (i) presence of positive internal resources such as prosociality, resilience, self-compassion, adaptive coping strategies, sense of common humanity, self-esteem, emotional regulation, and perceived self-efficacy [14–18].

Some psychoeducational programs implementing well-being in adolescents have focused on this last set of variables, namely the characteristics of positive internal resources and their role in perceived social support [19–21]. Some studies suggest that educational interventions with adolescents that focus, for example, on the themes of mindfulness, self-compassion, self-esteem, emotional regulation, and gratitude through theoretical and practical experiences of art and movement and mediation promote the capacity for benevolent acceptance of self and others without judgment, protecting against the attack on the self for the prevention of anxiety, depression, and low self-esteem [19, 22]. The study presented in this chapter, which was conducted within the neuropsychopedagogical training “Envisioning the Future” (EF), fits into the latter line of research. EF is an interdisciplinary training aimed at strengthening

adolescents' resilience and implementing positive resources related to the concept of self-compassion from an educational and preventive perspective.

## **2. Development in adolescence: The protective role of resilience and self-compassion**

Contemporary authors concerned with adolescent development and its relationship to mental health [23–25] have emphasized that adolescence is a period of significant change. Recent literature has increasingly focused on concerns about the psychological and relational problems that can slatenize in adolescence, with insufficient emphasis on the positive resources that can be implemented during the normal course of development [21, 23, 26, 27]. It should also be emphasized that this developmental period includes elements of neurobiological and psychophysical growth that are inseparable from each other [2, 9], as well as basic social, relational, and interpersonal role transitions with timelines that are not always predictable [5, 12].

Building on some of the theoretical and clinical landmarks of studies on well-being and mental health promotion in adolescence, we emphasize the need for a multidisciplinary and synergistic approach: clinical [16, 26], neurobiological [2, 7], specific to studies of personality factors [23], and the influences of the social and relational environment [5, 24].

If we refer to mental health as well-being in the psychological and social domains, we must accept that the preventive and educational obligation is to work on the presence and reinforcement of personal and interpersonal strengths that promote optimal functioning, such as: prosociality, positive interpersonal interactions, coping with stress and adversity, and social engagement [16, 18, 23, 25, 26]. The scientific literature [14, 28, 29] indicates that among the psychological constructs to be studied in order to effectively establish interdisciplinary trainings in adolescence, resilience is fundamental [21]. Resilience is understood as individual, group, and community skills that define effectiveness in coping with adversity, overcoming it, and coming out stronger [30, 31]. The ability to be resilient can modulate the impact of adversity on the individual and implement trajectories of individual and social improvement, on a continuum given by the interaction of genetic, biological-phenotypic, and environmental variables [32, 33]. Resilience can be trained through educational interventions to promote the well-being of individuals and communities [4, 7, 34, 35]. The construct of self-compassion also seems to be nodal [22], through the strengthening of some specific positive internal resources such as (a) the understanding and acceptance of how we take care of ourselves, (b) the ability to understand the personal way in which we deal with adversity, (c) the awareness with which we accept our reactions and behaviors without judging ourselves, and finally, (d) the way we regulate our emotions, welcoming them with kindness without over-identifying with them. Therefore, variables related to the concepts of resilience and self-compassion become nodal in the clinical study and educational-preventive intervention in this age group to promote genuine self-awareness and acceptance and appropriate emotional balance [36, 37]. Preventive interventions for the development of a resilient self in adolescence would ultimately capitalize on an individual's capacity for self-compassion and related variables (low levels of self-judgment, low levels of over-identification, good levels of openness and connection to the social-relational world, and good levels of self-kindness) [19, 37, 38] to promote a psychophysical state of individual and community well-being [22, 39].

## **2.1 Envisioning the future: A neuropsychopedagogical training to implement well-being in adolescence**

“Envisioning the Future” (EF) is a neuropsychopedagogical training based on the Sphere Model of Consciousness (SMC) [40], implemented by the Patrizio Paoletti Foundation (FPP) in 2017. It was born as an intervention in favor of people affected by the earthquake in central Italy [13, 41], then declined for different contexts, including the school reality. EF has produced positive results in terms of individual and contextual well-being in different contexts: in the juvenile justice system [18], in prisons [42], in social emergency contexts for parents and children of war refugees [4, 43], and in school settings [20, 27]. EF as presented here was implemented in schools immediately after the pandemic, in collaboration with the University of Padua. EF takes its name from the highest human capacity for abstraction, transcending space and time, making concrete what the individual aspires to, and turning every limitation into an opportunity for growth and change. The adaptation of EF training to the school context, targeting Italian middle and high schools, involved combining theoretical and practical neuroscience lessons to explain the characteristics of the resilient brain as the core of the intervention. A further objective, consequent to the first, is the teaching of techniques to increase the active and positive resources of the individual and the community. EF consists of a 9-week thematic training path for a total of 42 hours of training aimed at children and the entire school community. The interdisciplinary course called “The 10 Keys to Resilience” [4, 21] integrates notions of optimal resilient brain functioning with specific hands-on exercises, whose objectives are: (a) learning new psychophysical strategies to increase the intentional use of attentional and evaluative processes in order to enhance overall well-being; (b) training in recognizing, accepting without judgment and managing emotions in order to increase the individual’s ability to regulate them, and (c) increasing the level of individual and community well-being through learning positive cognitive reappraisal of the experience. Each key represents a distillation of interdisciplinary knowledge in the field of educational neuropsychopedagogy [44, 45]. “The 10 Keys to Resilience” are as follows [21]: (1) start with what you can control and make small choices; (2) set an achievable, challenging, and measurable goal; (3) become aware of your posture several times a day; (4) be inspired by stories; (5) ask yourself what is really important; (6) cultivate gratitude; (7) appreciate others as a resource, maintain and expand your social network; (8) cultivate curiosity; (9) practice a few minutes of silence; (10) embrace and transform: before going to sleep, create your own tomorrow today. Each session/key includes both a reflection on the scientific knowledge of the topics discussed and the connection to everyday life situations, as well as practical self-coaching experiences for each suggested key. Each lesson based on “The 10 Keys to Resilience” includes relaxation and meditation activities, mindfulness training and guided visualizations, proactive and non-self-judgmental storytelling education, and prosociality training, with the goal of generating a positive matrix of common resilience [46, 47].

## **3. Development in adolescence: The protective role of resilience and self-compassion**

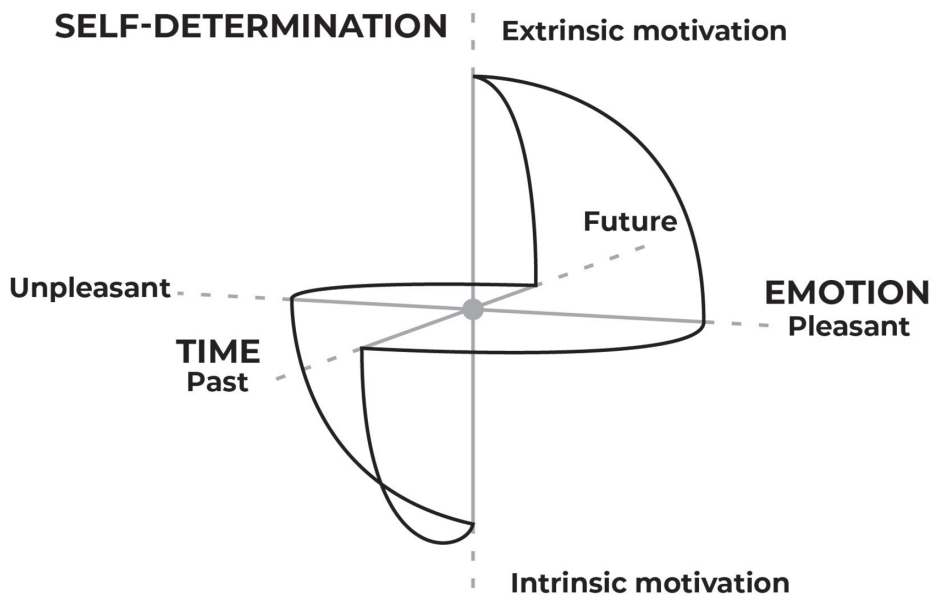
The Sphere Model of Consciousness (SMC) [34, 40] presents a neuropsychological framework for optimal brain functioning, represented by the geometric coordinates

of a sphere (**Figure 1**). This model provides guidance for enhancing consciousness through the development of awareness in the physical, emotional, mental, and spiritual dimensions (the latter understood as ideal aspirations and values related to personal and collective well-being).

The three main axes of the SMC (*time, emotion, self-determination*), which intersect, delineate two different planes (horizontal and vertical) associated with the development and manifestation of specific dimensions of consciousness. The horizontal plane is associated with the automatic and reactive dimension of the subject, in which beliefs and expectations are the result of the continuous projection and conditioning of the past into the future; the vertical plane is associated with the dimension of self-determination, in which it is possible for the subject to choose to direct himself or herself toward the improvement of his or her condition from a wider range of responses that are freer from contextual conditioning. The vertical axis of the model underlies the resilient stance. The primary goal is to move from hyper-activation of instinctive reactivity (lower brain areas) to expanded awareness using creative reappraisal processes governed by the more evolved part of our brain (prefrontal cortex) [21].

The SMC, used in the development of the EF training program for adolescents, provides theoretical and practical pathways for cultivating spherical and resilient consciousness. This concept extends beyond personal awareness to include relational and social dimensions, ultimately reaching a planetary scale [21]. Within this paradigm, well-being and personal benefit, along with their opposites, are intrinsically linked to collective benefit in a reciprocal relationship, both directly and indirectly [44, 47].

In fact, the EF training program, based on the SMC, guides adolescents through a dual relational dimension that focuses on self-awareness (which lives in the personal



**Figure 1.**  
SMC: basic structure (adapted from Ref. [42]).

dimension, the “I”) and external awareness (which lives in two dimensions, the social dimension, the “We” and that of the extended human family, the “Other than us”) [47].

These interrelated and reciprocal dimensions (“inner self” and “outer self”), linked to the *four functions of consciousness* “I feel, I want, I can, and I am” (Figure 2) [35], are explored through interdisciplinary knowledge organized according to the “10 Keys to Resilience”. Each key represents a neuropsychopedagogical thematic pathway linked to practical exercises to train the four functions of consciousness. These functions are graphically associated with the three axes and the center of the sphere. The center of the sphere, related to being, is driven by the threefold relational dimension: *I, We, Other Than Us* [35, 47]. The EF training program emphasizes the development of self-awareness, intentional attention, and the ability to maintain an equidistant position from experience. This cultivates a state of neutrality and compassion that replaces self-criticism and judgment. Adolescents learn to cognitively and emotionally reframe experiences, which promotes empathy and commitment to the best version of themselves [44]. Through the practice of neutrality and gratitude, the “other” becomes a source of knowledge and growth. The central position in the sphere represents an aspirational model that is achieved through training in the “10 keys to Resilience” [20, 48]. This process allows adolescents to recognize maladaptive and automatic responses in their physical, emotional and mental states, transforming conditionings into conditions and awakening a new empathic relationship in understanding themselves and others. The *feeling awareness* function is related to the relational dimension of the *I*: the subject learns to become aware of his or her body, emotions, and thoughts in time and space by intentionally using his or her attention to recall the here and now of experience. In the exercise of the division of attention [45], the discovery of events and the world is never self-referential, but sensitive to the mirror function of relationship for self-definition and the development of

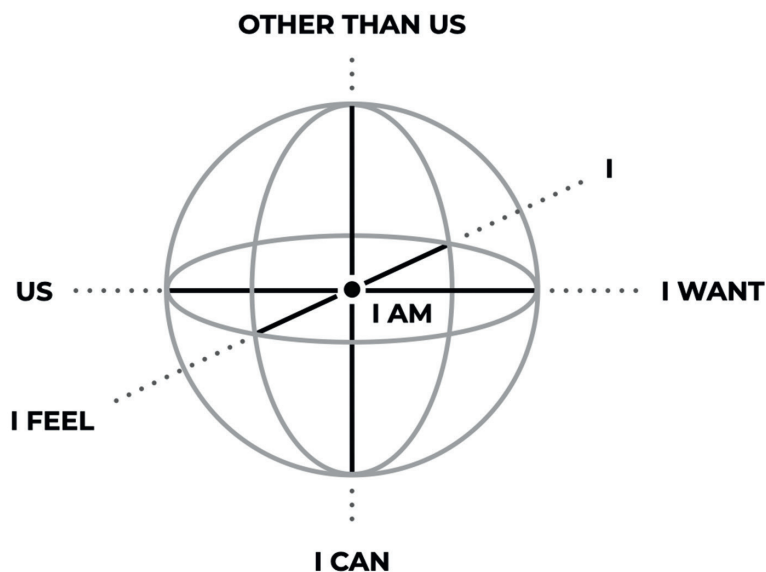


Figure 2.

SMC: dimensions of *I, We, Other than Us* related the four functions of consciousness “I feel, I want, I can, and I am” (adapted from Ref. [47]).

one's identity. The relational dimension of *We* is related to the awareness function of Wanting. Through the training of bringing oneself back to the center of the sphere through self-awareness, the relationship is no longer crushed by the will to seek reward (asking for flattery and approval) or to avoid punishment (submitting to or exerting control), but the relationship becomes a neutral mirror without judgment and as such a valuable source of desire for self-knowledge and growth [47]. It is a continuous choice driven by the desire to realize the best version of oneself [40], using the most evolved areas of the brain, in the awareness that one's physical, emotional, and mental state has an impact on the potential world. In the center of the sphere, where the being function of consciousness is active, it is possible to realize a continuous and new prefiguration of experience in which *I*, *We* and *Others than Us* are interconnected.

The adolescent learns to lead himself to the center of the sphere through the exercise of placing himself in a dimension of equidistance from events, where the state of neutrality and compassion for himself prevails over self-criticism and judgment. In the position at the center of the sphere, therefore, the search for one's own motivation, goal, value and meaning, freed from conditioning, is active: the child cognitively and emotionally restructures the experience, welcoming what is there without judgment, in order to lead himself empathically to the best version of himself [48]. It is in the passage of self-care through the exercise of neutrality and gratitude that the other becomes a source of knowledge and growth [44]. Being in the center of the sphere, in an equidistant position from the experiences, is a pattern to be inclined toward, the result of the training in the "10 Keys to Resilience" [21], through which the child learns to recognize the maladaptive and automatic responses of his or her physical, emotional and mental state, in order to transform conditionings into conditions, awakening a new empathic relationship in the way of understanding oneself and the other.

#### **4. Objectives and hypotheses**

The main objective of this study is to assess the characteristics of some basic variables related to positive internal resources of adolescents in the pre- and post-intervention related to the implementation of the EF program. Specifically, we hypothesize both an incremental change in dimensions related to resilience and self-compassion and a predictive relationship between these variables.

#### **5. Materials and methods**

The research project accompanying the implementation of the EF neuropsychopedagogical training was developed by the Research Institute for Neuroscientific Education and Didactics (RINED, Patrizio Paoletti Foundation) in collaboration with the University of Padua, whose Ethics Committee approved the study (file: 2020-III/13.41.10).

The students answered a series of online questionnaires in two phases: at the beginning of the training (t0, January 2023) and at the end of the training (t1, March 2023). The administration took place after informed consent was given to the families (administered by the schools participating in the research). Specifically, the

battery administered to the young participants included the following standardized questionnaires: (a) Resilience Scale-14 (RS14) [49, 50]: composed of 14 items with response on a Likert scale from 1 to 7 (1 = strongly disagree to 7 = strongly agree), it assesses the level of individual resilience; (b) Self-Compassion Scale (SCS) [51, 52] (SCS): 26 items with response Likert scale from 1 to 5 (from 1 = almost never to 5 = almost always), measuring six variables (three positive and three negative): self-kindness, common humanity, mindfulness, self-judgment, isolation and over-identification; (c) APEN/A—APEP/A (Personal Self-Efficacy Scales in Managing Negative and Positive Emotions) [53] to assess personal self-efficacy in managing negative and positive emotions. The questionnaire consists of 15 items on a 5-point Likert scale (from 1 = not at all capable to 5 = fully capable); (d) COPE-NVI (Coping Orientation to the Problems Experienced-New Italian Version) [11]: The measurement of two specific dimensions of coping (positive attitude and problem orientation) was carried out by administering the relevant subscales for a total of 24 items with response on a 4-point Likert scale (from “I usually don’t do it=1” to “I almost always do it=4”); (e) Temporal Perspective Scale [37], to measure the “future perspective” dimension: Consisting of 5 items with response on a 5 point Likert scale (from 1 = absolutely false to 5 = absolutely true); (f) “Prosocial Behavior” Scale [54]: Consisting of 16 items with response on a 5 point Likert scale (from 1 = never/almost never to 5 = always/almost always) to measure prosocial behavior; (g) Marlowe Crowne Social Desirability Scale-SF [13, 17]: consists of 9 items answered on a 6-point Likert scale (from 1 = absolutely false to 6 = absolutely true), measures the tendency to appear socially desirable.

## **5.1 Participants**

The sample consists of N = 400 student participants [167 males (41.75%), 228 females (56.99%) and 5 reporting “other” (1.25%)], with a mean age of 15.47 years (SD = 1.79, MIN = 12, MAX = 19) and 96% of Italian nationality. 21% attend secondary school (N = 84). 79% attend junior high school (N = 316). About 324 out of 400 students did not attend EF in previous editions (81%), while the remaining 19% did. The students in the study sample come from schools all over Italy, with a predominance from central Italy [Ancona (17.25%), Ascoli Piceno (14%) and Rome (11)] and southern Italy [Cosenza (13%), Bari (9.5%) and Naples (9.25%)].

## **5.2 Data analysis**

For data analysis, analyses of variance (one-way ANOVA) were performed to assess the differences between t0 and t1 in terms of psychological variables measured through standardized questionnaires. Descriptive statistics were performed prior to the analyses of variance, and the reliability of the standardized questionnaires was assessed by exploratory factor analysis. In relation to the two questionnaires whose measured variables showed pre-post intervention changes—APEN/A-APEP/A [49] and SCS [7, 37]—each factor structure corresponds to that from the original validation, with acceptable internal consistency scores (APEN/A-APEP/A *Cronbach’s alpha* = .7038, 2 N of items; SCS *Cronbach’s alpha* = .7312, 6 N of items).

Finally, an advanced regression analysis through a mediation model was performed to assess the effect of changing some independent variables on the dependent variable “resilience”.



## 6. Results

### 6.1 EF training: Pre-post intervention results

Analysis of differences between pre and post-scores on variables measured on interval scales using standardized questionnaires shows statistically significant changes in relation to:

1. self-efficacy in dealing with negative emotions, which increases from t0 (M = 23.3) to t1 (M = 26.9);
2. self-kindness, which increases from t0 (M = 2.81) to t1 (M = 2.99);
3. sense of common humanity, increasing from t0 (M = 2.83) to t1 (M = 3.03);
4. over-identification, decreasing from t0 (M = 3.42) to t1 (M = 3.32) (**Table 1**).

### 6.2 Predictor variables of resilience: A mediation model

Regression analyses were also conducted to assess the characteristics of the relationships between the resilience variable and the other measured variables. If, at t0, resilience is predicted by self-efficacy in regulating negative emotions ( $B = .77$ ;  $p < .001$ ) and the latter predicts the sense of common humanity ( $B = .05$ ;  $p < .001$ ), at t1, a mediation model is positive, stating that self-efficacy in regulating negative emotions predicts resilience through the effect of the sense of common humanity ( $B = .67$ ;  $p < .001$ ) (**Figure 3**).

This effect, therefore, occurs at t1 and not at t0: only after EF, in fact, does regulation of negative emotions seem to predict sense of common humanity ( $B = .03$ ;  $p < .001$ ), itself a predictor of resilience ( $B = 2.33$ ;  $p < .001$ ) (**Figure 4**). Thus, resilience is no longer just about not being overwhelmed by negative emotions, but also about regulating negative emotions to feel part of humanity.

Dependent variables	Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta squared
Negative emotions self-efficacy (APEN)	Pillai's Trace	,126	57,491	1	399	,000	,162
Self-kindness (Self-Compassion Scale)	Pillai's Trace	,034	12,92	1	372	,000	,034
Common Humanity (Self-Compassion Scale)	Pillai's Trace	,039	15,022	1	372	,000	,039
Over-Identification (Self-Compassion Scale)	Pillai's Trace	,011	3991	1	372	,046	,011

**Table 1.**  
*Pre-post intervention significant mean differences.*

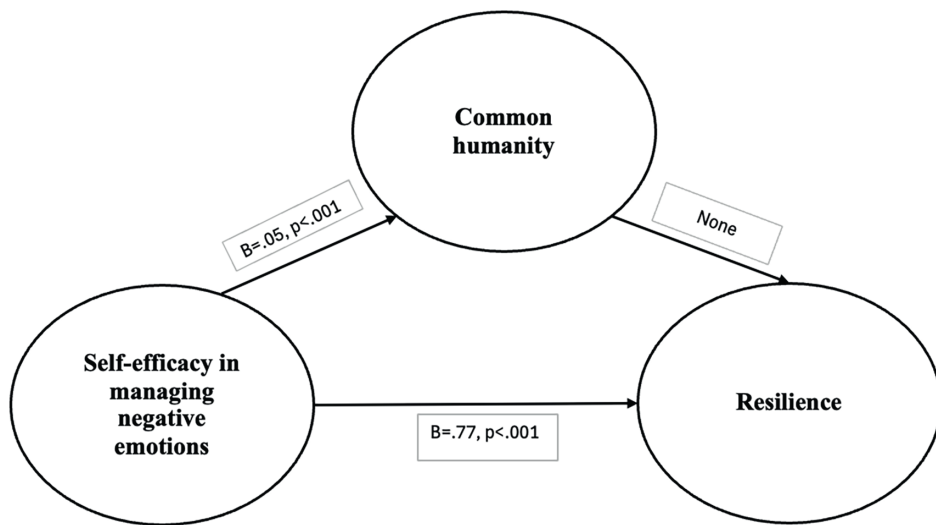


Figure 3.  
Resilience and its predictor variables: regression analyses at t0.

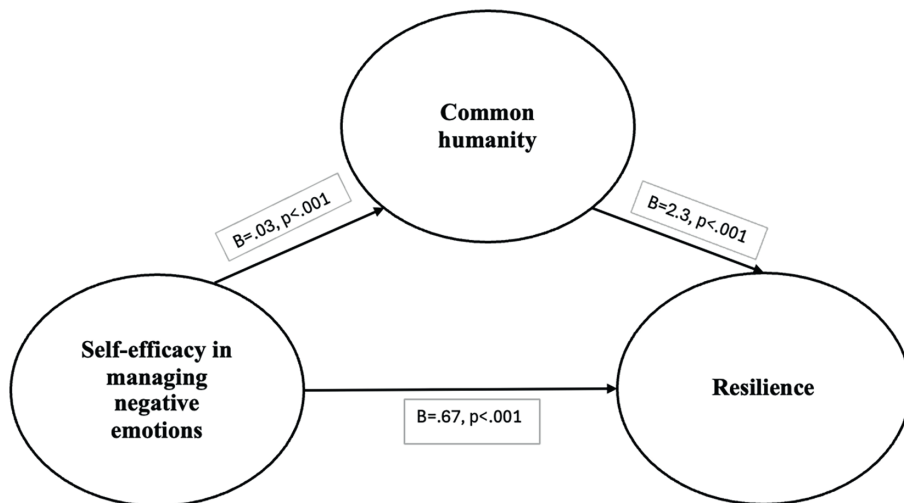


Figure 4.  
Resilience: predictor variables at t1 through a mediation model.

## 7. Discussion

Recent scientific literature has emphasized that perceived well-being is a multi-factorial individual, relational, social, and community construct [15, 55]. Even more so in a developmental individual, or rather in a stage of discovery and definition of self, others, and the world as an adolescent, this complexity must be enhanced and supported by educational practices aimed at implementing their self-efficacy in improving their health (physical and mental), promoting their life satisfaction, and their planning ability [5, 54].

The results of this study, which aimed to investigate which individual variables of young adolescents were affected by participation in the EF neuro-psychoeducational program and, moreover, what relationships there were between the variables themselves, found some aspects in line with contemporary scientific literature that can serve as a guide for improving educational programs promoting well-being in adolescents. Indeed, as highlighted in the scientific literature, educational intervention that aims to implement resilience and emotional regulation, improving self-efficacy and general well-being in adolescents, and mitigating the effects of stress, has a positive impact on school adjustment and academic performance [56–58].

Specifically, the differences between the means in the pre- and post-EF intervention revealed, first of all, an increase in the values of perceived self-efficacy in managing negative emotions, with a concomitant decrease in the levels of the variable of over-identification (perception of being overwhelmed by negative emotions), related to self-compassion. As found in numerous studies that have examined the effects of specific training on self-compassion, mindfulness, and the development of positive internal resources, high emotional regulation skills—which include the recognition, acceptance, and processing of both negative and positive emotions [54]—minimize the risk of being overwhelmed and trapped by the emotions themselves, which predisposes to social withdrawal, the choice of non-adaptive coping strategies, increased permeability to life stressors and prevents projecting into the future with hope and optimism [19, 22, 59]. In addition, analyses of the differences between the pre- and post-mean scores also showed an increase in self-kindness in the participating adolescents, which, as found in the literature, minimizes the risk of triggering self-judgment and self-criticism mechanisms in adolescents, which are inversely correlated with good levels of emotional resilience and psychological well-being [38]. In fact, underlying psychological well-being is the ability to understand without judging, which protects against judging for its own sake and attacks on the self that lead to the risk of developing major psychopathological symptoms such as anxiety, depression, and low self-esteem [19, 22, 39]. Moreover, the above-mentioned positive psychological variables have also been found to be nodal in the school setting as predictors of good school adjustment skills, with following improved academic achievements and better skills in planning for the future [56, 60–63].

Finally, the study of pre- and post-intervention EF differences also notes an increase in the sense of shared humanity, which includes the recognition that imperfection and failure are part of life and that by understanding the other us and being able to connect socially, we can activate adaptive coping strategies aimed at improving overall well-being and academic performances through an optimal school adjustment [29, 40, 56, 58, 59, 62–64].

Related to this last aspect is the result of the mediation model obtained in the present study, which shows that self-efficacy in the regulation of negative emotions predicts resilience through the effect of the sense of common humanity, reinforcing the idea of the importance of the triple relational dimension *I, We, Other than Us* [44] for a healthy developmental parabola, in line with the theoretical constructs mentioned above. This result explains the importance of emotional homeostasis and the non-identifying recognition of negative emotions in order to feel connected to the other, allowing the tripartite, individual, relational and collective self to work synergistically without judgment, for the definition of a complete and harmonious developmental path aimed at achieving an optimal level of psychophysical and relational well-being, with a potential positive impact on academic performance and maintenance of supportive peer relationships in school and out-of-school settings [5, 10, 65, 66].

## **7.1 Limitations and future directions**

The present study has several methodological limitations. First, the use of self-report questionnaires may have introduced social desirability bias in the survey [67], which was controlled by the administration of a standardized control questionnaire and by pseudonymization (with the use of identifying acronyms), which was useful to ensure correspondence between responses at t0 and t1, but also to ensure a greater sense of spontaneity in the survey.

Another limitation is the lack of longitudinal follow-up data and the presence of a comparison/control group, which hindered the possibility of implementing more complex statistical models to study the characteristics of the variables under investigation [55].

Further studies can investigate these aspects by collecting data from comparison/control samples and follow-up data (t2, at least 3 months after t1) to understand the long-term duration of EF benefits and compare program outcomes for participants with a comparison group that does not do so [36].

## **8. Conclusions**

In conclusion, in light of the present study, specific psychological variables related to resilience, such as self-kindness, management of negative emotions, and sense of common humanity, are confirmed as central to healthy adolescent development, increased overall well-being, and optimal school adjustment.

Moreover, in light of this study, preventive and interdisciplinary interventions such as EF, designed on the theoretical basis of SMC, which focuses on the development of three relational dimensions (*I, We, Others than Us*), seem to be effective for the development of a resilient self in adolescence, not only in terms of an individual but also a collective well-being perspective. The results of the study indicate that the adolescent becomes resilient and able to regulate negative emotions through a growing sense of common humanity. The study seems to suggest that theoretical-practical pathways designed on this interdisciplinary perspective can be useful in the promotion of not only individual but also relational well-being both in school and out-of-school settings, as they educate not only to direct care and attention to oneself, in a personal dimension, but also to the outside world, in an expanded human dimension.

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## **Conflict of interest**

The authors declare no conflict of interest.

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