

## **Perceived emotional intelligence and satisfaction with life among adolescents: The mediating role of resilience**

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**Abstract:** Although there is a growing interest in identifying the psychological strengths that enhance students' life satisfaction, there is a lack of understanding of the mechanisms involved in during adolescence. This study aimed to examine whether resilience serves as mediator in the relationship between perceived emotional intelligence and life satisfaction in adolescence. To prove this hypothesis, nine hundred and forty-five adolescent students were asked to complete several self-report questionnaires: the Trait Meta-Mood Scale, the Connor-Davidson Resilience Scale, and the Satisfaction with Life Scale. Analysis of the hypothesized model indicated that resilience mediated the association between the three dimensions of emotional intelligence (emotional attention,

emotional clarity, and emotional repair) and life satisfaction. Results also revealed a direct influence of the sub-scale of emotional repair on life satisfaction. According to the multi-group test, the identified model was invariant across gender so that the resilient processes through which perceived emotional intelligence affects student's life satisfaction were similar for males and females. The present findings highlight the importance of developing resilience as a possible target for school interventions aimed at improving adolescent's life satisfaction. In addition to these implications, the article concludes with limitations and directions for further research suggesting the need for longitudinal studies beyond self-reported measures.

**Keywords:** Perceived emotional intelligence; Resilience; Life satisfaction; Adolescence; Positive psychology.

## **INTRODUCTION**

In the past, the deficit-oriented perspective dominated the field of psychology, showing more interest in detecting individuals' problematic behaviors and weaknesses than in studying their strengths (Pemberton and Wainwright, 2014). Prevailing view did not only affect psychology in general, but also specific domains like school psychology, that mostly focused on remediating students' deficits (Elmore and Huebner, 2010; Weber et al., 2016). More recently, the positive psychology (Seligman and Csikszentmihalyi, 2014) and positive youth development (Larson, 2000; Lerner et al., 2005) movements have yielded a rising preference aimed at fostering mental health and promoting wellbeing in education (Kristjánsson, 2012; Shankland and Rosset, 2017). This emergent interest in the context of schooling has evolved into the domain of "positive education", a growing area of inquiry that seeks to promote student flourishing within educational settings (Seligman et al., 2009; Slemp et al., 2017). Nowadays, most researchers accept the statement that well-being is necessary for adolescents to perform optimally in school and for protecting them from potentially harmful stressors (Forrest et al., 2013). Notwithstanding, there is a dearth of empirical research on the relationship between psychological skills and well-being (Sánchez-Álvarez et al., 2016). This study concentrates on the influence of perceived emotional intelligence (PEI), and cognitive subjective well-being (life satisfaction), as well as considers how resilience might act as mediator.

### **Life satisfaction and education**

As the field of educational research develops from detecting deficits to also improving students' capabilities, accurate analysis about the interplay between psychological strengths will contribute to desirable adolescence outcomes. Research directly links adolescents' psychological adjustment with their perceptions, personal assessments, and objectives regarding their own lives, this including their subjective well-being (BenArieh et al., 2014). Although early work about subjective well-being focused on adult samples, recent studies have extended to school students (Huebner et al., 2014). Subjective or psychological well-being is understood to be a multidimensional construct that involves both emotional and cognitive elements (Salami, 2011). It can be conceived as a self-evaluation including both positive and negative emotional responses, along with cognitive evaluations of satisfaction with life (Diener et al., 2013). Cognitive subjective well-being or life satisfaction is a process of subjective evaluation of one's life as a whole (Diener, 2008) and it is the most commonly studied construct in research analyzing child subjective well-being (Lyons and Huebner, 2016). This subjective perception is considered a crucial factor in the context of school as studies have demonstrated a positive relationship between high levels of life satisfaction and positive academic characteristics as student engagement, connection with teachers, or academic performance (Forrest et al., 2013; Lyons and Huebner, 2016; Ng et al., 2015). Furthermore, high levels of life satisfaction may be a protective factor against maladaptive behaviors (Huebner et al., 2014). Conversely, low levels of life satisfaction have been related to potential adverse consequences, maladaptive behaviors and school disengagement (Huebner et al., 2014; Lewis et al., 2011). These results emphasize the importance of including education for subjective well-being in the school curriculum as a major objective. Accordingly, schools should focus efforts on promoting the life satisfaction of their students (Noddings, 2003)

because they are adequate locations that can readily facilitate students' optimal functioning

### **PEI's link to life satisfaction**

Emotional intelligence (EI) continues to be a relevant concept of considerable interest in literature, as well as in practical application, especially in psychoeducational settings and mental health. There are two main traditions when it comes to conceptualizing this construct. The first one defines EI as a set of mental abilities, whereas the second one consists in not only cognitive abilities but also emotional and social skills that help individuals to enhance their personal functioning (Mayer et al., 2008; Petrides and Furnham, 2000). It is particularly the former one, the ability EI (Mayer et al., 2016; Mayer and Salovey, 1997), the conceptualization that has provided the most influential framework in psychological research. Within this theoretical approach, there are two possible methodological procedures to measure these cognitive-emotional abilities: (1) maximum performance tests that evaluate individuals' effectiveness and performance of these abilities; and (2) self-reports that gather information about how effective people think they are when implementing them. Thus, in this way, these are two different processes that occur simultaneously complementing each other (Liu et al. 2013).

The present study follows the ability EI theoretical approach and uses a self-report measure to assess PEI, the Trait Meta-Mood Scale (TMMS; Salovey et al. 1995), which evaluates an individual's self-perceived emotional skills (Salovey et al., 2002). PEI is defined as a continuous, reflective process linked to beliefs about the attention to one's

feelings, mood clarity and perceived ability to repair one's emotional state (Salovey and Mayer, 1990). According to Salovey et al. (1995), attending to the emotions refers to the ability to notice and think about own feelings. Emotional clarity involves the ability to understand one's mood and to discriminate among feelings. Emotional repair is related to the ability to repair or moderate a bad mood. These emotional skills are known to play a crucial role in helping to enhance adolescents' global cognitive evaluation of their satisfaction with their own lives (Extremera et al., 2011; Sánchez-Álvarez et al., 2016).

In a school context, PEI has been shown to be linked to better psychological adjustment in adolescence (Balluerka et al., 2013). Theoretical and empirical studies suggest that emotional skills may play a role in enhancing life satisfaction; nevertheless, the emotional processes which underpin cognitive subjective well-being during adolescence are unclear (Sánchez-Álvarez et al., 2015). There is some dispute regarding the nature of the associations between PEI dimensions (i.e., emotional attention, emotional clarity, and emotional repair) and life satisfaction. As the different PEI aspects relate to different facets of emotional ability their association with life satisfaction may change. In this regard, some studies suggest that life satisfaction is related to all three dimensions of PEI measured by the TMMS, whereas others find that either only emotional clarity and emotional repair are related to life satisfaction, or only emotional clarity or emotional repair is related to life satisfaction (Sánchez-Álvarez et al., 2015). More precisely, early research regarding the potential direct influences of TMMS subscores on well-being reveal that higher levels of emotional attention have been associated with worse psychosocial adjustment (Extremera and Fernández-Berrocal, 2006) and with depressive symptomatology (Thayer et al., 2003). Higher levels of emotional clarity, by contrast,

have been linked with better life satisfaction (Extremera and Fernández-Berrocal, 2006); this dimension would explain the absence of negative thoughts and improve the understanding one's mood, thus promoting fluid thinking and psychological adaptation. Similarly, different studies indicate that higher levels of emotional repair have been related to psychological functioning (Hodzic et al., 2016) because of the ability to maintain positive mood states. In synthesis, there is a strong evidence about the importance of various PEI dimensions as predictors of scores on life satisfaction, possibly due to the emotional management skills that individuals with a high level of PEI have.

Generally, correlational research has demonstrated that individuals with high PEI scores are closely associated with a better capacity to maintain positive mental states and achieve a greater sense of life satisfaction (Sun et al., 2014). While the positive relationship between PEI and life satisfaction is well established by the previous research, the functioning that might account for this relationship is still unclear (Urquijo et al., 2016) and merits further attention from a multidimensional perspective of PEI.

There is some evidence that the relationship between PEI and life satisfaction is mediated by psychological processes (Kong and Zhao, 2013); notwithstanding, the relationships in which specific dimensions of PEI are involved indirectly with life satisfaction are also not very well described because the broad majority of the previous studies regarding structural models of the association between PEI and life satisfaction are based in a global PEI variable and therefore do not provide enough information on how the different dimensions of PEI are specifically involved (Sánchez-Álvarez et al., 2015).

### **The mediating role of resilience in the relationship between PEI and life satisfaction**

Even though there is compelling evidence in support of the association between global PEI with life satisfaction, further analysis of potential mediators in this relationship may clarify the mechanisms through which each dimension of PEI affects psychological well-being (Extremera and Rey, 2016; Sánchez-Álvarez et al., 2015). In this regard, prior research has found that resilience turns out to be a psychosocial variable that exerts a potential mediating role among other affective processes (Liu et al., 2013).

Resilience is crucial for academic and social success in school and life (Noble and McGrath, 2016). As a relevant psychological resource on good adolescents' adjustment, resilience has attracted great interest in educational positive psychology due to the key role played by educational institutions as promoters of students' well-being (Masten, 2014b; Toland and Carrigan, 2011). The study of psychological resilience in an educational context seeks to understand why some students are able to adapt or bounce back in the face of adversity or even emerge from it strengthened. This phenomenon has been defined as a dynamic process that encompasses positive adaptation within an adverse environment (Luthar et al., 2000). Despite the lack of consensus regarding its definition (Fletcher and Sarkar, 2013), resilience generally represents the ability to cope adequately with the developmental tasks inherent to a specific development stage, despite the risks that same stage poses in developmental context (Masten, 2014a). This construct is considered to be particularly complex, since it encompasses traits, outcomes, and processes related to the capacity to bounce back from unfavorable circumstances (Oshio et al., 2018). The present study understands resilience as a composite of several distinct



capacities or resources that an individual can draw on to enhance individual adaptation and overcome adversity. In line with this, Connor and Davidson (2003) explained that there can be different reactions to cope with an stressful situation. On one side, the stressor may represent an opportunity to grow and increase the person's resilience, and thereby promote a return to a higher level of balance; on the other side, the person may have adjustment problems and deploy destructive means to cope with the stressor. This means that resilient students may ensure their psychological adjustment through buffering negative effects from difficult times. All students face adversity at one time or other in general, but more specifically during adolescence, young people develop a set of resilience processes that help them cope positively with stressful circumstances (Wright et al., 2013).

In terms of the association between PEI and resilience, the literature in this area confirms that people with better PEI are more resilient. According to several studies, PEI is directly connected to resilience, insofar as emotionally intelligent behavior in adverse situations is adaptive; moreover, according to Armstrong et al. (2011) resilience varied as a function of PEI, so that individuals with higher scores in resilience were perceived to be emotionally more intelligent in various facets (i.e., emotional self-awareness, emotional expression, emotional self-control, and emotional self-management). In fact, higher levels in the abilities to effectively self-manage and regulate own's emotions managed to predict a significant level of resilience (New et al., 2009). The findings displayed are in line with the study carried out by Schneider et al. (2013), which showed that PEI fosters resilient and adaptative functioning during stressful situations. These authors noted that higher PEI would facilitate the stress process by promoting resilient psychological

responses, so these findings provided some validation of the mediating role of resilience between PEI and stress, a variable understood as a maladjustment indicator. Likewise, Magnano et al. (2016) demonstrated that people who are able to perceive, access and regulate emotions can handle and adapt to stressful situations better. Hence, PEI is expected to contribute to resilience. This study follows the view that emotional intelligence has an impact on resilience (Armstrong et al., 2011; Matthews et al., 2002) and not the approach that emotional intelligence includes resilience (Bar-On, 1997), due to the fact that PEI operates through its composite dimensions to facilitate resilience. It states that persons who can clearly perceive their own feelings and are convinced that they can repair negative mood states may direct their attentional resources toward coping and minimizing the negative impact of stressful events (Salovey et al., 2002).

Furthermore, some authors have suggested that adolescent resilience is an essential enabling factor for different positive adjustment indicators (Rodríguez-Fernández et al., 2016; Sagone and De Caroli, 2014). Studies have showed that resilient individuals could maintain their psychological health through buffering negative consequences from difficult times (Connor and Davidson, 2003). Regarding the associations between resilience and life satisfaction, there is compelling evidence in favor of the existence of positive correlations (Hu et al., 2015; Liu et al., 2012; Liu et al., 2013; Liu et al., 2014; Lü et al., 2014). Additionally, some authors emphasize the incidence of resilience in life satisfaction (Bajaj and Pande, 2016; Bajaj et al., 2016).

It should, however, be pointed out that little research has been conducted on the simultaneous role of PEI and resilience in life satisfaction (i.e., Limonero et al., 2012;

Noorbakhsh et al., 2010) during adolescence. Perhaps the most direct antecedent is the study which demonstrates that resilience mediates the relationship between trait emotional intelligence and life satisfaction in an undergraduated student sample (Liu et al., 2013). Whatever the case, there is not general agreement regarding what explanatory capacity PEI may have in relation to that same variable from a multidimensional point of view. Moreover, no previous structural model has taken all the dimensions of PEI in a sample of adolescent students. In light of this, the present study was designed to address that gap.

### **The current study**

In summary, the purpose of this study was to explore the mediating role of resilience in the relationship between PEI (i.e., emotional attention, emotional clarity, and emotional repair) and life satisfaction among Spanish adolescents.

Consistent with earlier findings (Liu et al. 2013), we hypothesized that the relationship between PEI and life satisfaction would be mediated by resilience. Previous research has indicated that PEI is indirectly linked to life satisfaction (Zeidner et al., 2012), and that resilience is dependent upon PEI (Armstrong et al., 2011). Therefore, we also expected that PEI would exert a significant indirect effect on life satisfaction through the mediating effect of resilience. Specifically, individuals with higher PEI have greater resilience thereby increasing their life satisfaction. The expected relationships among the study variables are depicted in Fig. 1.

In summary, the current study tested the mediation effect of resilience on the relationship between PEI and life satisfaction among adolescent students. Based on prior research, we proposed the following hypotheses:

Hypothesis 1: The three dimensions of PEI (emotional attention, emotional clarity, and emotional repair) predicted significantly resilience.

Hypothesis 2: Resilience predicted significantly life satisfaction.

Hypothesis 3 Resilience mediated the association between the three dimensions of PEI and life satisfaction.

## **METHOD**

### **Participants and Procedure**

Participants were 948 adolescent students (425 male, 520 female:  $M_{\text{age}} = 14.50$  years,  $SD = 1.82$  years; range 12-17 years) from five secondary schools in the Basque Country (Spain). The objectives and the research procedure were explained to the staff of each center. Students who provided signed consent from their parents/guardians received instructions and information about the aim of the study. Participation was strictly anonymous and voluntary, and none of the adolescents refused to participate in the research project.

All participants were administered a packet of questionnaires measuring EI, life satisfaction, and resilience. The measures were completed during class time under the supervision of the researchers themselves, who answered questions and comments raised by the adolescents throughout the evaluation process, ensuring their confidential and independent responds.

The study was approved by the research ethics committee of the University of the Basque Country and complied with the ethical values established for psychological research and assessment, and respected the basic principles laid out in the American Psychology Association's ethics code and in current regulations (informed consent and the right to information, protection of personal data and confidentiality guarantees, non-discrimination, non-remuneration and the right to withdraw from the study at any time).

## **Measures**

**Perceived Emotional Intelligence.** This construct was self-reported by adolescents using the 24-item version of the Trait Meta-Mood Scale (TMMS; Salovey et al., 1995), adapted to Spanish by Fernández-Berrocal et al. (2004). It has three dimensions: (a) emotional attention (e.g., "I think about my mood constantly"); (b) emotional clarity (e.g., "I almost always know exactly how I am feeling"); and (c) emotional repair (e.g., "Although I am sometimes sad, I have a mostly optimistic outlook"). Responses to all the items are made using a five-point Likert-style scale (totally disagree-totally agree). The Cronbach's alpha reliability indices obtained with this sample were: emotional attention (.89), emotional clarity (.87), and emotional repair (.84). The composite reliability coefficient (CFC) of

the questionnaire was .88 and average variance extracted (AVE) was .50.

**Life Satisfaction.** Participants' global life satisfaction was assessed using the Spanish version of the Satisfaction with Life Scale (SWLS; Diener et al. 1985), validated by Atienza et al. (2000). This scale comprises five-items (e.g. "I am satisfied with my life", "If I could live my life over", I would change almost nothing") answered in a Likert-type scale with 7 response options (strongly disagree-strongly agree). Validation and psychometric qualities of the SWLS revealed good indices (Diener et al., 1985). Cronbach's  $\alpha$  in this sample was .82, CFC was .83, and AVE was .51.

**Resilience.** Resilience was evaluated by the CD-RISC 10-item Resilience Scale (Campbell-Sills and Stein, 2007). This abbreviated version of the Connor-Davidson Scale (Connor and Davidson, 2003) consists of 10 statements (e.g., "Can deal with whatever comes", "Able to adapt to change") and responses are made on a 5-degree Likert scale (0=strongly disagree, 5=strongly agree). In this study, the internal consistency coefficients were acceptable:  $\alpha$ =.75, CFC=.88, and AVE=.50

### **Data Analysis**

Descriptive characteristics were analyzed using SPSS Statistics 24.0 and the confirmatory analysis was computed using SPSS Amos 24. Extreme values (1.4%) were eliminated using the SAS program. Rate of missing data was low (2.4%); therefore, no imputation procedures were implemented.

The bootstrap method was applied, as offered by the AMOS 24 program (with 2000 repetitions and establishing a confidence interval of 95%). This method calculates the empirical distribution for the statistics using random sampling with replacement. Therefore, the estimates are robust insofar as they are not affected by a lack of normality in the residual distribution.

The two-step procedure outlined by Anderson and Gerbing (1988) was followed for the development and testing of the theoretical model proposed in this study. The first step involves a confirmatory factor analysis (CFA) of the measurement model, which includes the relationships between the observed variables and the latent variables. The second step includes a CFA of the causal relationships between the constructs of the model as specified by the theory.

In order to verify the hypothesized model regarding the potential mediating role of resilience between PEI and life satisfaction, structured equation procedure was applied. The maximum likelihood estimation (ML) method was used. To evaluate the overall fit of the model to the data, several indexes proposed by Hu and Bentler (1999) and Kline (2015) were calculated in the current study: Chi square statistic ( $\chi^2$ ) and its level of associated probability, CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), RMSEA (Root Mean Square Error of Approximation) with its confidence interval (CI), and SRMR (Standardized Root Mean Square Residual). The Chi squared test was also included to compare the estimated models. For the CFI, values over .90 indicate acceptable fit, whereas values over .95 indicate a good fit. Values on the SRMR and the RMSEA near .05 indicate an excellent fit, whereas values between .05 and .08 indicate an acceptable

fit (Hu and Bentler, 1999; Kline, 2015).

## **RESULTS**

### **Preliminary analysis**

Means, standard deviations, reliability estimates (Cronbach's alpha, CFC, and AVE coefficients), and bivariate zero-order correlation coefficients among variables are displayed in Table 1.

### **Measurement model**

CFA analysis was conducted to test the measurement model before testing the structural relationships. The measurement model consisted of five interrelated latent variables (emotional attention, emotional clarity, emotional repair, satisfaction with life, and resilience) whose indicators were those items of the scales in the corresponding test. The results of this analysis revealed a good level of model adjustment:  $X^2_{(512)} = 1652.90$ ,  $p < .001$ ; CFI = .92; TLI = .91; SRMR = .062; RMSEA = .049 (90% CI = .046 - .051).

### **Analysis of the theoretical model**

The verification of the directional relationships between all the variables involved in this study was performed in accordance with structural equation modeling (SEM) (Fig. 1). To test the hypothesized model, the goodness-of-fit indices for the following models were



compared: 1) the partial mediating model between emotional intelligence and life satisfaction through resilience with direct paths from all the dimensions of PEI (emotional attention, emotional clarity, and emotional repair) to life satisfaction, and 2) the full mediating model between PEI and life satisfaction through resilience with direct paths from all the dimensions of PEI (emotional attention, emotional clarity, and emotional repair) to life satisfaction constrained to zero.

On one hand, the partial mediating model posits the indirect effect of all the branches of PEI (emotional attention, emotional clarity, and emotional repair) on life satisfaction through resilience including direct effects from the different dimensions of PEI to satisfaction with life. The goodness of fit indicators obtained in the partial mediating model were within accepted margins, thus suggesting a reasonable global fit:  $X^2_{(514)} = 1660.30$ ,  $p < .01$ ; CFI=.916 TLI=.908; SRMR=.062; RMSEA=.049 (90% CI=.046–.051). However, after a thorough analysis of the estimated parameters it was observed that not all path directions raised achieved statistically significant explanatory levels: from emotional attention to satisfaction with life ( $\beta = -.040$ ,  $p = .27$ ); and from emotional clarity to satisfaction with life ( $\beta = .126$ ,  $p = .57$ ). These results suggested that while emotional attention and emotional clarity are not directly associated with satisfaction with life, all the sub-scales of PEI (emotional attention, emotional clarity, and emotional repair) exert an indirect effect on life satisfaction thanks to the mediator role of resilience.

On the other hand, the full mediating model proposes exclusively indirect effects of PEI factors (emotional attention, emotional clarity, and emotional repair) on life satisfaction thanks to the mediating role of resilience. An analysis of the resulting parameters

indicated that the full mediating model also fit the data well:  $X^2_{(515)} = 1676.66$ ,  $p < .01$ ; CFI=.915 TLI=.907; SRMR=.063; RMSEA=.049 (90% CI=.046–.051). According to the regression coefficients, all of the proposed pathways reached significant levels ( $p < .05$ ).

Taking into account the difference between the two models, as well as the degrees of freedom, the Chi squared test on the discrepancy proved statistically significant ( $\Delta X^2_{(1,N=945)} = 16.36$ ,  $p < .01$ ), indicating that the two models were significantly different. This was also confirmed by the cross-validation index (ECVI). When studying the goodness-of-fit indexes of the tested models (Table 2), it was observed that both the partial mediating model (M1) and the full mediating model (M2) provided acceptable results, with the partial mediation model having the better fit to the data. Consequently, the partial mediating model constitutes the first choice for explaining adolescent life satisfaction on the basis of the dimensions of PEI and resilience. According to the ECVI, partial mediating model (M1) is the one that presents a better degree of replicability, since it has a lower value in this index than the full mediating model (M2).

### **Standardized direct and indirect effects between the study variables**

If the partial mediating model's (M<sub>1</sub>) regression coefficients are analyzed individually (Table 3), it becomes clear that all the direct pathways proposed obtained significance level ( $p < .01$ ), except those pathways from emotional attention and emotional clarity to satisfaction with life. Thus, emotional attention, emotional clarity, and emotional repair were found to have a predictive capacity of 38.2% in relation to resilience, with emotion clarity being the variable with the greatest predictive power ( $\beta = .407$ ,  $p < .01$ ).

The Bootstrapping method was applied to assess the mediating impact of resilience. This resampling procedure makes it possible to create 2000 bootstrap iterations through random sampling with replacement. According to the results, all the three dimensions of PEI exerted their indirect effect on satisfaction with life through resilience. If emotional attention, emotional clarity, and emotional repair are compared, it becomes clear that the PEI dimension with the greatest indirect predictive power in relation with satisfaction with life is emotional clarity ( $\beta=.185$ ,  $p < .01$ ). These results suggest that emotional attention, emotional clarity and emotional repair activate resilience ( $R^2=.382$ ) as a mediator variable which in turn has a direct effect, along with emotional repair, on adolescent life satisfaction ( $R^2=.313$ ). To see the path coefficients of the ultimate model in standardized form, see Fig. 2.

### **Multiple group analysis across gender**

Multigroup analyses were performed to test for potential differences between females and males in the represented paths coefficients. Two hypothetical models were collated: the configural model (with all of its paths to vary across gender  $X^2_{(1028)} = 2238.73$ ,  $p < .01$ ; CFI=.91; TLI=.90; SRMR=.063; RMSEA=.035, 90% CI=.033–.037). and the other constraining the structural paths across gender to be equal (for the constrained model  $X^2_{(1033)} = 2245.81$ ,  $p < .01$ ; CFI=.91; TLI=.90; SRMR=.064; RMSEA=.035, 90% CI=.033–.037). The data revealed the absence of gender differences due to two main reasons: first, no significant differences were found between the constrained and the configurable model ( $\Delta X^2_{(5, N=945)} = 7.09$ ;  $p = .21$ ); and second, all associations for both groups according to gender were very similar when each path coefficient was examined in the separate

multiple-group analyses.

## **DISCUSSION**

Drawing on the background of positive psychology, there has only recently been a focus on adolescents' psychological strengths in the context of education. Nowadays schools are seen as institutions where their role extends beyond academic competence to further fostering students' psychological and social adjustment. While schools have aimed for academic excellence as sole evidence for their success, they are now acknowledging the need to develop students' socio-emotional skills with a stronger focus on well-being (Borkar, 2016). As espoused by Noble and McGrath (2016), focus on strengths in academic settings encourages the valuing of students' diverse strengths as a valuable asset, as well as promotes the provision of opportunities through the curriculum and school-based activities. One possible initial approach to the implementation of positive education, a relatively new orientation which depicts the application of positive psychology research to educational settings, is the incorporation of strength-based assessments. Based in positive psychology (Seligman and Csikszentmihalyi, 2014) and expanding on previous research, the goal of this study was to query a model that empirically tested whether or not resilience mediated the association between PEI (i.e., emotional attention, emotional clarity, and emotional repair) and life satisfaction in a sample of adolescent students. The empirical confirmation of this theoretical model has contributed to shed some light on the associations between PEI, resilience and life satisfaction among Spanish adolescent students. In this regard, the present study differs from previous research in the inclusion of the PEI dimensions to represent emotional

abilities in the proposed model. In line with our expectations, the concurrent indirect effects of emotional attention, emotional clarity and emotional repair on life satisfaction via resilience were significant. That is, adolescent students with higher levels of PEI had a propensity to be more resilient, which may contribute to an increase in their life satisfaction.

According to the obtained results, only emotional clarity and emotional repair seem to be positively related to both resilience and life satisfaction. This is in the line with previous research that pointed out the moderate correlation between these both PEI dimensions and life satisfaction (Rey et al., 2011). Furthermore, all the PEI dimensions contribute to promote adolescent life satisfaction through resilience. After all, it must be borne in mind that PEI, as a protective factor promoting stress-resiliency, plays an important role in the activation of strategies that could help in achieving a higher level of psychological adjustment (Hodzic et al., 2016). In particular, findings suggest that only the sub-scale of emotional repair has a direct effect on life satisfaction, while emotional attention and emotional clarity, along with emotional repair, affect it indirectly through resilience. As we expected, the best model from the current study did support the positive direct effects from most emotional facets to resilience. Thus, emotional clarity and emotional repair were found to have a greater impact than emotional attention on resilience, as well as a greater indirect influence on life satisfaction. These findings revealed that the clarity with which secondary school students experience emotions seems to be the PEI dimension that has greater impact on their ability to cope with developmental tasks despite the risks. However, the closest relationship was found between emotional clarity and resilience, whereas resilience was observed to be a decisive psychological factor in student's life

satisfaction during adolescence. These results posed that the indirect effect of emotional clarity in life satisfaction through resilience is more influential than the direct effect of emotional repair itself on life satisfaction. In accordance with our expectations, findings confirmed that resilience predicted significantly life satisfaction. This is in accordance with previous studies that report resilience as a crucial source of student's psychological health (Harms et al., 2018; Noble and McGrath, 2016).

In the current study, emotional attention exerts a weak negative direct effect on resilience, as well as an indirect inverse effect on life satisfaction. These results are in accordance with those of Extremera and Fernández-Berrocal (2006) who reported the existence of a negative relationship between emotional attention and mental health. Similarly, the previous findings support the notion that emotional attention is negatively related to psychological well-being, as well as positively to neuroticism (Augusto-Landa et al., 2010). Thus, it seems that an excessive attention to emotions, especially when there are difficulties in understanding them, could contribute to ruminative thinking which may jeopardize wellbeing (Pena and Losada 2017).

Evidence was also found of the mediating role played by resilience in the relationship between PEI dimensions and life satisfaction. If we compare the contribution of the different elements included in the model, it becomes clear that life satisfaction is mainly determined by resilience. In this regard, the most important finding of this study is that resilience partially mediates the relationship between PEI and life satisfaction in adolescents. This statement supports that resilience plays a paramount role in determining mental health and well-being during adolescence. In addition to this, these findings

strongly suggest that the resilient processes through which PEI enhance adolescent life satisfaction are similar in females and males.

Although the results extracted can aid in improved understanding of the mediating role of resilience between PEI and life satisfaction in adolescence, the present study also have several limitations that should be mentioned. First, the data are self-reported recorded throughout a cross-sectional design. Despite the good psychometric properties of the selected measures and the relevance of students own perceived beliefs captured by self-report measures the data collection may be complemented with direct measures in future work. In this sense, future research should include multiple assessment methods that would take into account the information obtained from other objective sources, such as teachers, parents or peers, to further strengthen the validity of the findings. In the same way is preferably longitudinal data because this study demonstrates relations and predictive capacity between variables; but never shows cause-effect associations. Therefore, further research that test the model with longitudinal data to establish the casual relationships between the variables of the study is warranted. Although the cross-sectional design provides partial information at a particular time, this approach to the reality enables us to detect significant variables in the intervention design to enhance adolescents' life satisfaction. Second, the current sample was comprised of secondary school adolescents aged between 12 and 17, so the age range of the sample should be extended in order to prove if the findings can be applied at different developmental stages. Finally, future research may shed more light on the mediational variables between PEI and life satisfaction by integrating other psychological and contextual variables that, simultaneously with resilience, would provide a more thorough analysis of the issue.

Despite these limitations, the study has both theoretical and applied implications. On a theoretical level, the data obtained in this research support the theoretical model tested according to which resilience is a mediating variable between emotional intelligence and life satisfaction. The fact that resilience depends on PEI as a precedent and in turn influences cognitive assessments of adolescent life satisfaction, points to the need for schools to provide adolescents with emotional skills to overcome adversity and ensure personal fit. Such findings may valuably guide how to implement future positive psychological school-based interventions targeting adolescent mental health. On a practical level by understanding dispositional predictors of life satisfaction, school can include a teacher-delivered resilience module into the standard curriculum. The implementation of resilience-promoting school programs may be an effective approach to improving the likelihood of increasing adolescent well-being, without forgetting that emotional repair has a positive direct impact on life satisfaction. Besides, if we take into account that emotional intelligence and resilience are skills (Mayer et al. 2016; Mayer and Salovey 1997; Oshio et al. 2018), and therefore potentially developable and improvable, we easily reach the conclusion that the improvement of those two psychological variables studied would buffer the influence of stress on satisfaction with the adolescents' lives (Hodzic et al. 2016), as well as reducing maladaptive behaviors (Álvarez-García et al. 2015) and mental disorders (Dray et al. 2017).

However, it is necessary to design intervention programs that aim to develop and improve these two variables (emotional intelligence and resilience), but worked at the same time and in a coordinated manner. Only the implementation of such programs in the



classrooms would allow to verify, under a longitudinal study and experimental design, whether the improvement of the emotional intelligence of the adolescents influences the levels of resilience and these, in turn, on the increase of the perception of life satisfaction in adolescence.

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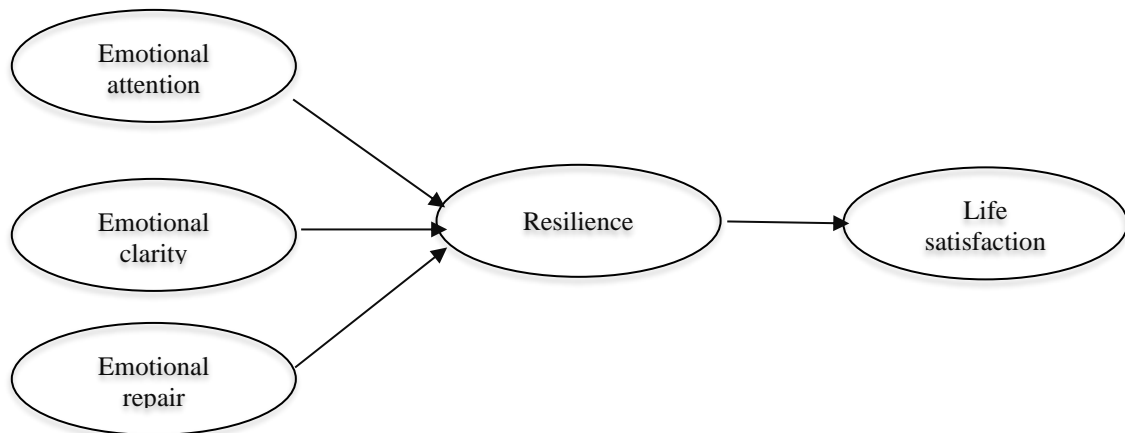
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*Fig 1.* Schematization of the hypothesized model

Table 1

*Means, Standard Deviations, Reliability, and Bivariate Correlation between the Study Variables.*

Variables	1	2	3	4	5
1. EA	1	.273**	.177**	.006	-.018
2. EC		1	.429**	.398**	.309**
3. ER			1	.460**	.372**
4. RE				1	.428**
5. SWL					1
M	25.00	25.00	27.02	29.60	25.77
SD	7.06	6.63	6.72	4.66	5.72
$\alpha$	.89	.87	.84	.75	.82
CFC	.88	.90	.83	.88	.83
AVE	.50	.53	.50	.50	.51

*Note: \*\*p < .01. EA: Emotional Attention. EC: Emotion Clarity. ER: Emotion Repair. RE: Resilience. SWL: Satisfaction With Life. CFC: Composite Reliability Coefficient. AVE: Average Variance Extracted.*

Table 2

*Goodness-of-fit Parameters for the Hypothesized and Alternative Models*

Model	$\chi^2_{(gl)}$	CFI	TLI	SRMR	RMSEA <sub>(IC)</sub>	ECVI <sub>(IC)</sub>
M <sub>1</sub>	1660.30 <sub>(514)</sub>	.916	.908	.062	.049 <sub>(.046-.051)</sub>	1.92 <sub>(1.80-2.06)</sub>
M <sub>2</sub>	1676.66 <sub>(515)</sub>	.915	.907	.063	.049 <sub>(.046-.051)</sub>	1.94 <sub>(1.81-2.07)</sub>
$\Delta M_1-M_2$	16.36 <sub>(1)</sub>					

*Note.* M<sub>1</sub>: Partial mediating model; M<sub>2</sub>: Full mediating model; CFI and TLI >.90 (acceptable fit); RMSEA and SRMR < .05 (good fit) or .05  $\geq$  .08 (acceptable fit).

Table 3

*Standardized Direct and Indirect Effects between the Study Variables*

		Model direct pathways	Path coefficient	Indirect effects
Direct mediator	without	Emotional attention → Resilience	-.150**	--
		Emotional clarity → Resilience	.407**	--
		Emotional repair → Resilience	.347**	--
		Resilience → life satisfaction	.453**	--
		Emotional attention → life satisfaction	-.040	--
		Emotional clarity → life satisfaction	.126	--
		Emotional repair → life satisfaction	.170**	--
Indirect mediator	with	Emotional attention → Resilience → Satisfaction		-.068**
		with life		
		Emotional clarity → Resilience → Satisfaction with life		.185**
	Emotional repair → Resilience → Satisfaction with life		.157**	

Note: \* $p < .01$ .  $R^2$ (Resilience) = .387;  $R^2$ (Satisfaction with life) = .314.



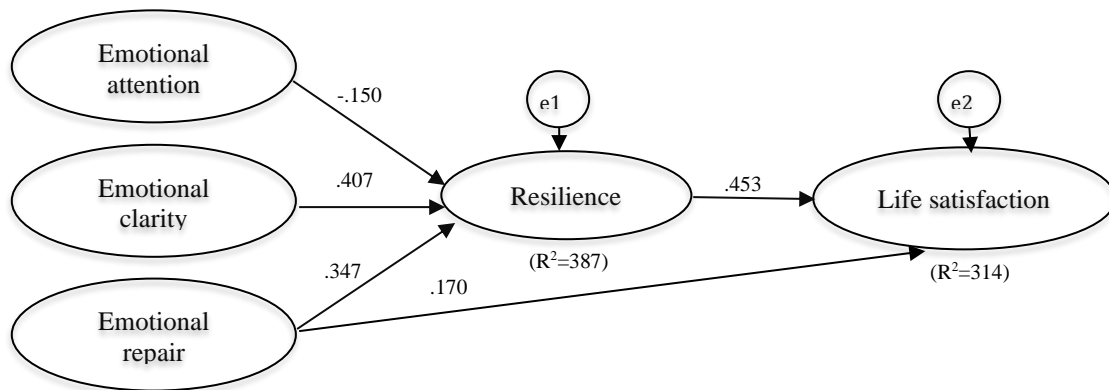


Fig. 2. Standardized coefficients of the final partial mediational model