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Does emotional awareness lead to resilience? Differences based on sex in adolescence

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ABSTRACT

Adolescence presents many challenges and changes, making the prevention of mental disorders significant. Resilience is considered a key factor in understanding the emotional development of adolescents, as it allows them to overcome adversity and learn to generate personal resources that promote their psychological well-being. Emotional awareness and emotional regulation are highlighted as protective factors against adversity. Emotional awareness refers to the ability to recognize, understand, and accept own and others' emotions. In contrast, emotional regulation involves controlling emotions and modifying behavior to achieve goals, adapt to the context, or promote well-being. Although it is known that these factors have an important effect on the resilience capacities of adolescents, few empirical studies analyze this relationship. This study aims to examine the effect of emotional awareness on resilience, as well as the possible mediation of emotional regulation strategies (cognitive reappraisal and suppression), and to consider possible sex differences in a sample of 376 Spanish adolescents. Statistical techniques such as T-Test, Pearson correlation, confirmatory factor analysis, and structural equation modeling were applied. Factorial invariance between groups was also examined, and a structural invariance analysis was performed. The results indicate that emotional awareness itself does not have a direct effect on the resilience of adolescents. In addition, there are sex differences in the impact of emotional awareness on regulation strategies. Therefore, it is necessary to consider Emotional awareness as a necessary condition for developing adaptive emotional regulation strategies as cognitive restructuring in the design of programs that contemplate the promotion of resilience in adolescents.

¿La consciencia emocional conduce a la resiliencia? Diferencias en función del sexo en la adolescencia

Palabras clave:
Adolescencia
Resiliencia
Consciencia emocional
Regulación emocional
Estrategias
Sexo

RESUMEN

La adolescencia es una etapa del ciclo vital que presenta muchos desafíos y cambios para los jóvenes, lo que hace que la prevención de trastornos mentales sea importante. La resiliencia se considera un factor clave en la comprensión del desarrollo emocional de los y las adolescentes, ya que se considera que permite a los y las adolescentes superar las adversidades y aprender a generar recursos personales para promover su bienestar psicológico. De acuerdo con investigaciones previas, la consciencia emocional y la regulación emocional adaptativa se destacan como factores protectores frente a la adversidad. El objetivo del presente estudio es examinar el efecto de la consciencia emocional sobre la resiliencia, así como la posible mediación de las estrategias de regulación emocional (revaloración cognitiva y supresión) en esta relación, considerando posibles diferencias según el sexo en una muestra de 376 adolescentes españoles. Para ello, se han aplicado técnicas estadísticas como T-Test, correlación de Pearson, un análisis factorial confirmatorio y un modelo de ecuaciones estructurales. Los resultados indican que la consciencia emocional por sí sola no tiene un efecto directo en la resiliencia de los y las adolescentes pero sí indirecto

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a través de la reestructuración emocional. Además, existen diferencias de género en cuanto al efecto de la consciencia emocional sobre las estrategias de regulación. Por tanto, es necesario considerar la consciencia emocional como una condición necesaria para desarrollar estrategias de regulación emocional adaptativas como la revaloración cognitiva en el diseño de programas que contemplen la promoción de la resiliencia en los y las adolescentes.

Introduction

The prevention of mental disorders during adolescence poses a significant challenge due to the myriad demands and changes that individuals face during this life stage (Rutter, 2007). In addressing this challenge, resilience has emerged as a key factor in understanding adolescent emotional development, presenting as a potential preventative resource. Resilience encompasses not only the capability to overcome and persist in the face of adversity but also presents an opportunity for learning and generating personal resources conducive to psychological well-being (Masten, 2018; Salanova, 2022). Among these personal resources, emotional awareness and adaptative emotional regulation play a notable role as protective factors against adversity (Salanova, 2022).

Emotional awareness is an emotional competency that facilitates the recognition, understanding, and acceptance of one's own and others' emotions (Bisquerra & Pérez-Escoda, 2007). Conversely, emotional regulation involves managing emotions and modifying behavior to achieve goals, adapt to contexts, or promote well-being (Gross, 1998). Cognitive reappraisal and emotional suppression are two strategies employed in emotion regulation (Gross & John, 2003). Although cognitive reappraisal is generally regarded as adaptative, emotional suppression is seen as maladaptive (Aldao et al., 2010; Schäfer et al., 2017). Current literature suggests that emotional awareness and regulation significantly impact adolescents' resilience capacities, although empirical studies analyzing this relationship remain scarce. Thus, the present study aims to examine the effect of emotional awareness on resilience and the potential mediation of emotional regulation strategies, namely cognitive reappraisal and, suppression, within this relationship, while considering potential differences according to gender.

Classical theoretical perspectives have deemed resilience as a stable trait promoting adaptation to various stressors' negative impacts (Connor & Davidson, 2003). The current conceptualization of resilience, however, has incorporated premises from the Development Systems Theory, a framework that understands development as a dynamic and non-linear process comprised of various systems, and, at the same time, influenced by the interaction of distinct processes (Masten & Barnes, 2018; Overton, 2013). Within this framework, resilience is perceived as the product of a complex process in which interact factors such as genetics, past experiences, family characteristics, the social context, and the individual's biological and psychological components (Cicchetti, 2010; Luthar et al., 2000; Sætren et al., 2019). While resilience is no longer viewed as an immutable trait, individual differences markedly influence its development (Masten & Barnes, 2018). Notably, the construct of ego-resilience deserves mention. It refers to individual traits like adaptability to changes and recovery from traumatic or stressful situations (Luthar et al., 2000; Sætren et al., 2019).

The environment is regarded as another contributing factor to resilience development. Through protective factors like relationships, resources, role models, and processes, adaptability is enhanced and individuals are able to face challenges (Masten & Barnes, 2018; Mestre et al., 2017). Recognizing resilience as a fluctuating, evolving process heavily influenced by various internal and external factors, rather than a fixed trait, involves acknowledging the interplay of cognitive, attitudinal, and behavioral aspects that can be nurtured and refined over a lifetime.

Recognizing resilience as a flexible, rather than a fixed trait, suggests that it can be cultivated and enhanced through programs focusing on skill development, which bolster the aforementioned elements (Chmitorz et al., 2018; Masten, 2018; Salanova, 2022). Prior research underscores the effectiveness of such initiatives, particularly during childhood and adolescence. This heightened impact is likely due to influential factors such as brain plasticity and the maturation of cognitive functions, which are notably active during these stages and considerably diminish thereafter (Sætren et al., 2019). Nonetheless, further studies are needed in the context of childhood and adolescence, as these are evolutionary stages in which the implementation of programs to promote resilience is particularly favorable (Pinto et al., 2021).

Strengthening resilience's protective factors is of the uppermost importance when addressing mental health issues in childhood and adolescence (Dray et al., 2017; Huang et al., 2020). One of these factors, emotional regulation, is described by Gross (1998, p. 275) as ẗhe processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions.T̈he positive effect of emotional regulation on well-being, adaptation, and social interaction has been demonstrated (Peña-Sarrionandia et al., 2015; Mayer et al., 2016), and its importance is such that difficulties in emotional regulation can undermine decision-making processes or heighten anxiety (Hartman et al., 2017; Wills et al., 2016). Recent studies, including those conducted by Banyard et al. (2017), Mestre et al. (2017), Lee et al. (2019), Polizzi and Lynn (2021), or Vaughan et al. (2019), have identified a positive relationship between emotional regulation and resilience. These studies conclude that adaptative emotional regulation strategies, such as cognitive reappraisal, foster resilience's protective and promotive factors, thus rendering them a salient characteristic of resilience (Sætren et al., 2019). It is worth noting that not all emotional regulation strategies are equally adaptative. Certain maladaptive strategies, such as catastrophizing, rumination, and suppression, can potentially exacerbate emotional situations, thereby they may become risk factors (Aldao et al., 2010; Gross, 2002; John & Gross, 2004). Therefore, incorporating adaptative emotional regulation strategies is recommended in promoting resilience's protective and promotive factors. This study delves into two frequently explored strategies: cognitive reappraisal, an adaptative strategy, and suppression, a maladaptive strategy (Megías-Robles et al., 2019).

Within the scope of Gross' modal model (Gross, 1998, 2015), cognitive reappraisal is defined as an emotional regulation strategy that modifies the interpretation or perception of an emotionally relevant situation to attenuate its emotional impact. In contrast, cognitive restructuring refers to a broader process employed to identify and rectify dysfunctional thought patterns. Generally, cognitive reappraisal is regarded as an adaptative strategy considered an adaptative strategy, with its consequences including better social relationships, better health, self-esteem, and life satisfaction (Cabello et al., 2013; Gross & John, 2003). Conversely, emotional suppression is an emotion regulation strategy that inhibits emotions following the onset of emotional reactivity (Gross, 1998,

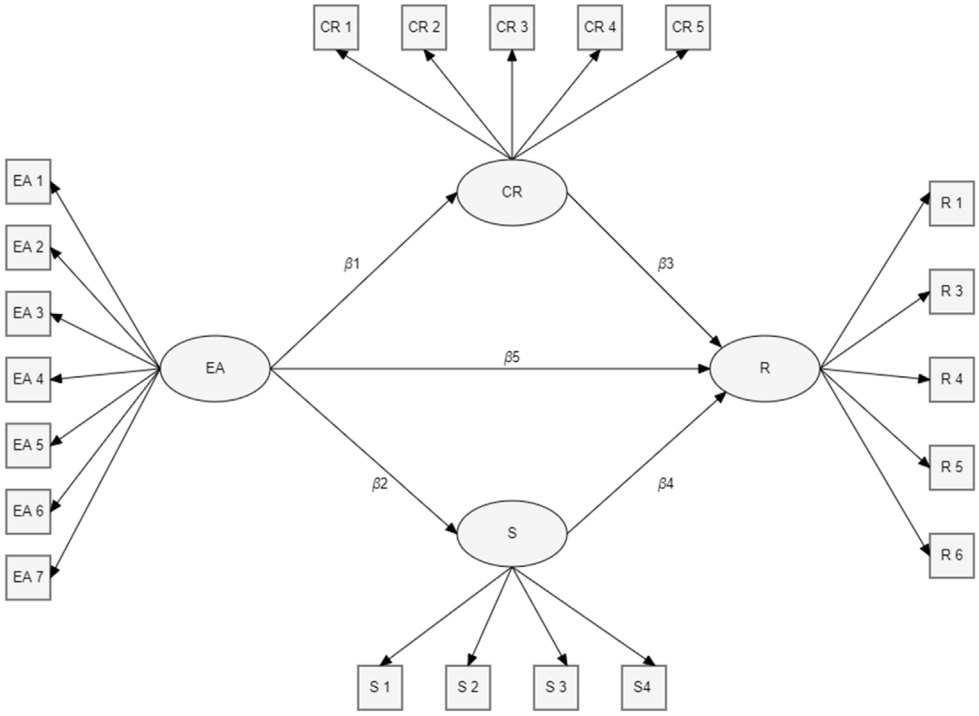

Figure 1. Structural Equation Model (SEM). *Note*. EA = emotional awareness; CR = cognitive reappraisal; S = suppression; R = resilience.

2002). It is considered a maladaptive strategy that consumes a higher percentage of cognitive resources and features prominently in various pathologies (Aldao et al., 2010; Schäfer et al., 2017). In fact, a recent study reveals that individuals scoring higher in emotional intelligence tend to use cognitive reappraisal more frequently (Megías-Robles et al., 2019).

Both resilience and emotional regulation can be influenced by emotional awareness, understood as the ability to accurately recognize and label one's emotions and comprehend others' emotions, in the sense that emotional awareness facilitates subsequent emotional regulation (Bisquerra & Pérez-Escoda, 2007). In line with the model of Bisquerra and Pérez-Escoda (2007), emotional awareness is considered one of the five emotional competencies, together with emotional regulation, emotional autonomy, social competence, and life and well-being competencies. They can be trained and enhanced throughout life, promoting adaptation to the context and tackling life circumstances with greater odds of success. Furthermore, emotional awareness is considered the most fundamental skill for the development of more complex emotional competencies or abilities (Bajgar et al., 2005; Lane, 2000).

The impact of emotional awareness on adolescent resilience have been only examined to a limited extent. However, among other samples, emotional awareness has emerged as a crucial factor for bolstering resilience. Lee et al. (2019), for instance, discovered that deficiencies in emotional awareness adversely affect resilience in a comparative sample of adults who have either experienced abuse or not. Further, studies by Jacobs and Keegan (2022) or Kinman and Grant (2011) underscore both resilience and emotional awareness as core elements in mitigating poor emotional health in elite athletes and emergency service personnel, respectively. Subic-Wrana et al. (2014) also included emotional awareness as a critical variable in their research, concluding that diminished emotional awareness can intensify the relationship between maladaptive emotional regulation strategies like emotional suppression. However, individuals with heightened emotional awareness tend to favor adaptative regulation strategies such as cognitive reappraisal.

Another factor that has been shown to participate in the resilience capacity of adolescents is their sex. Current data reveals that girls tend to score higher than boys in terms of emotional awareness (Subic-Wrana et al., 2014). There have also been discernible sex-based differences in the utilization of emotional regulation strategies such as cognitive reappraisal and emotional suppression, although the findings are not definitively conclusive (Nolen-Hoeksema & Aldao, 2011; Zlomke & Hahn, 2010). This situation mirrors resilience research, wherein sex effects have been less frequently considered (Dray et al., 2017; Mestre et al., 2017). A meta-analysis indicates a slightly higher, albeit statistically insignificant, score favoring girls, coupled with a low effect size (Alkım & Çarkit, 2020). Nevertheless, the inconsistent findings across studies suggest a complex interplay between sex and resilience is complex and other factors may interactively participate, such as the degree of self-control in externalizing factors (Salanova, 2022).

The present study

The present study, drawing upon the work of Polizzi and Lynn (2021), highlights the importance of discerning the different factors that underpin the resilience capacities of adolescent males and females, to design effective pedagogical strategies in favor of emotional regulation. Concurrently, the study by Dray et al. (2017) accentuates the importance of understanding possible gender differences in the way these factors operate. Consequently, this research intends to explore how emotional awareness, cognitive reappraisal, and suppression contribute to the resilience capabilities of adolescents and how these relationships might diverge across genders. The research questions guiding this study are as follows: (RQ1: What is the relationship between *emotional awareness* and *resilience* in adolescents, and does this relationship differ by sex?; (RQ2) How does *emotional awareness* influence *cognitive reappraisal* and *suppression* strategies, and do these influences differ by sex?; (RQ3) How do *cognitive reappraisal* and *suppression* strategies influence *resilience* in adolescents, and do these influences differ by

Table 1
Descriptive statistics of the constructs comprising the model

	M	*SD*	Skewness	Kurtosis
Emotional awareness (EA)	6.832	1.431	−0.814	1.671
Cognitive reappraisal (CR)	4.457	1.189	−0.455	0.392
Suppression (S)	4.035	1.364	−0.074	−0.515
Resilience (R)	2.977	0.756	−0.150	−0.183

Note. *M* = Mean; *SD* = Stantard Deviation.

Table 2
Prueba T para muestras independientes de las variables que componen el modelo. Diferencias en función del sexo

	Boys		Girls		*t*	*p*	*d* de Cohen
	M	*SD*	*M*	*SD*			
Emotional awareness (EA)	7.037	1.424	6.631	1.414	2.714	0.007*	0.286
Cognitive reappraisal (CR)	4.570	1.230	4.346	1.140	1.793	0.074	0.189
Suppression (S)	4.067	1.334	4.003	1.395	0.449	0.653	0.047
Resilience (R)	3.182	0.694	2.777	0.762	5.271	< .001*	0.556

Note. *M* = Mean; *SD* = Standard Deviation; *t* = Student's *t*-test; *p* = *p < .05.

sex?; and, (RQ4) Do the emotional regulation strategies of *cognitive reappraisal* and *suppression* mediate the relationship between *emotional awareness* and *resilience*, and does this mediating effect differ by sex?

Based on the literature reviewed in the previous paragraphs, the following hypotheses have been formulated: (H1) *Emotional awareness* has a direct positive effect on *resilience*; (H2) *Emotional awareness* is positively related to the use of adaptive emotional regulation strategies such as *cognitive reappraisal* and negatively related to the use of maladaptive emotional regulation strategies such as emotional *suppression*; (H3) *Cognitive reappraisal* has a direct positive effect on adolescent *resilience*, and emotional *suppression* has a direct negative effect on adolescent *resilience*; (H4) The emotional regulation strategies of *cognitive reappraisal* and *suppression* will have a mediating effect on the relationship between *emotional awareness* and *resilience*, capable of enhancing or attenuating this relationship; and, (H5) The magnitude of the constructs studied, as well as the magnitude of their relationships, will display variability according to sex.

Method

Participants

The total sample of the study consists of 376 secondary school students from different Spanish schools. The distribution based on gender is balanced, with 50% boys and 50% girls. Additionally, the sample includes an adequate representation of the different grade levels, with 76 participants in 1st year (20%), 117 in 2nd year (31%), 83 in 3rd year (22%), and 100 in 4th year (27%).

Instruments

Developmental Emotional Questionnaire for Secondary Education (CDE-SEC; Pérez-Escoda et al., 2022) is a self-report questionnaire composed of five subscales that measure the five emotional competencies of the theoretical model proposed by Bisquerra and Pérez-Escoda (2007). It utilizes a Likert scale with 11 response options. In this study, the subscale of emotional awareness, which includes 7 items, was administered.

Emotion Regulation Questionnaire for Children and Adolescents, Spanish version (ERQ-CA; Navarro et al., 2018) comprises 10 items divided into two subscales corresponding to two regulation strategies: cognitive reappraisal and suppression. The response format is a 5-point Likert scale with five response option.

The *Brief Resilience Scale*, Spanish version (BRS; Rodríguez-Rey et al., 2016) measures resilience as the ability to cope with and recover from stressful situations. It consists of 6 items, and participants respond using a 5-point Likert scale with five response options.

Procedure

To ensure the study's effectiveness and rigor, necessary authorization was obtained from the Department of Education to conduct the intervention in selected high schools. Additionally, the study received approval from the corresponding University Ethics Committee, ensuring adherence to ethical and legal standards. In order to protect the privacy and anonymity of the participants, guidelines outlined in the Declaration of Helsinki (Asociación Médica Mundial, 2013) have been followed. The participating educational centers informed the families about the content and objectives of the research. Since the participants are minors, the families signed an informed consent, which includes detailed information about the procedure and implications of the study.

Data analysis

The statistical analysis was conducted using the lavaan package, which belongs to the R programming language, along with the IBM SPSS software version 28 and its AMOS extension. As a preliminary step to data analysis, participants who exhibited unlikely response patterns were identified and removed using Mahalanobis distance (Leys et al., 2018). Consequently, 12 participants were excluded from subsequent analyses. To examine the mean values of each group and the magnitude of the differences between them, an independent samples *t*-test was performed. Additionally, Pearson correlation statistics were employed to explore the relationships between the studied constructs within each group.

In order to address the research questions, a Structural Equation Model (SEM, Figure 1) was designed. As a preliminary step, following Anderson and Gerbing (1988), Confirmatory Factor Analysis (CFA) was conducted to assess the validity and fit of the measurement model in both groups. Fit statistics such as $\chi 2$, Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) were used. Cutoff values indicating acceptable fit are typically CFI and TLI > .90, RMSEA < .06, and SRMR < .08 (Cho et al., 2020; Hu & Bentler, 1999). Furthermore, to assess the reliability and internal consistency of the scales used, psychometric

Table 3
Pearson Correlation Statistics among the variables comprising the model for the boys' group and the girls' group

	Boys				Girls			
	1	2	3	4	1	2	3	4
1. Emotional awareness (EA)	–				–			
2. Cognitive reappraisal (CR)	0.448*	–			0.499*	–		
3. Suppression (S)	0.105	0.396*	–		−0.242*	0.031	–	
4. Resilience (R)	0.221*	0.122	−0.137*	–	0.329*	0.359*	−0.175*	–

Note. *$p < .05$.

Table 4
Model invariance comparison between boys and girls

Model	χ^2	*df*	CFI	TLI	RMSEA	Model Comparison						
						Comparison	$\Delta\chi^2$	Δdf	*p*	ΔCFI	ΔTLI	ΔRMSEA
Boys	531.86	207	.928	.906	.064	–	–	–	–	–	–	–
Girls	390.09	207	.932	.913	.050	–	–	–	–	–	–	–
1. Configural Invariance	921.87	414	.948	.932	.059	–	–	–	–	–	–	–
2. Metric Invariance	955.77	428	.937	.931	.059	2 vs. 1	33.90	14	<.01	.01	<.01	.01
3. Scalar Invariance	1061.44	450	.924	.918	.061	3 vs. 2	105.67	22	<.01	.01	<.01	.01
4. Strict Invariance	1088.49	460	.917	.917	.061	4 vs. 3	27.06	10	<.01	<.01	<.01	<.01

Note. $\chi 2$ = Chi-squared; *df* = degrees of freedom; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation. The model comparison includes Δchi-squared (increase in chi-squared value between two models), Δdf (increase in the number of degrees of freedom between two models), *p* (statistical significance level), ΔCFI (increase in CFI value between two models), ΔTLI (increase in TLI value between two models), and ΔRMSEA (increase in RMSEA value between two models).

Table 5
Model fit and factorial invariance testing based on sex

	Indicator	Boys					Girls				
		Croncbach's α	ω	CR	AVE	Factor Loadings	Croncbach's α	ω	CR	AVE	Factor Loadings
		.751	.752	.847	.44		.718	.727	.848	.44	
Emotional awareness (EA)	EA 1					.714					.600
	EA 2					.774					.720
	EA 3					.631					.585
	EA 4					.558					.545
	EA 5					.685					.566
	EA 6					.627					.596
	EA 7					.650					.543
		.842	.845	.859	.47		.805	.807	.810	.41	
Cognitive reappraisal (CR)	CR 1					.788					.606
	CR 2					.724					.661
	CR 3					.725					.552
	CR 4					.557					.674
	CR 5					.606					.600
	CR 6					.717					.766
		.692	.695	.774	.47		.752	.762	.782	.48	
Suppression (S)	S 1					.738					.746
	S 2					.659					.566
	S 3					.687					.711
	S 4					.630					.720
		.783	.786	.812	.47		.724	.737	.784	.42	
Resilience (R)	R 1					.687					.672
	R 2					.288					.323
	R 3					.765					.610
	R 4					.689					.694
	R 5					.648					.571
	R 6					.613					.694

Note. Croncbach's α = Cronbach's Alpha; ω = McDonald's Omega; CR = Composite Reliability; AVE = Average Variance Extracted.

Table 6
Standardized parameters extracted from the model

Paths	Boys				Girls			
	β	S. E.	C.R. (z)	*p*	*β*	S. E.	C.R. (z)	*p*
EA → RC	.553	.094	5.201	<.001*	.556	.080	5.116	<.001*
EA → S	.266	.090	2.526	.012	−.281	.078	−2.781	.005*
RC → R	.456	.073	3.772	<.001*	.375	.084	3.211	.001*
S → R	−.146	.063	−1.448	.148	−.170	.063	−1.841	.066
EA → R	.161	.066	1.298	.194	.142	.065	1.156	.248

Note. *$p < .05$; EA = Emotional awareness, CR = Cognitive reappraisal; S = Suppression; R = Resilience.

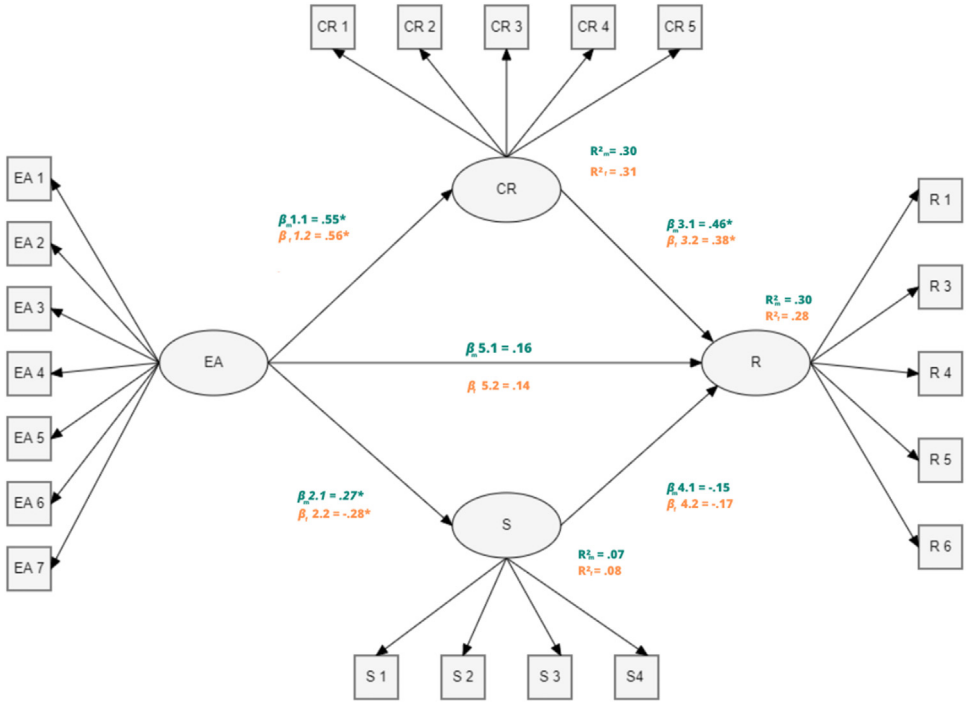

Figure 2. The final solution of the structural model. *Note.* EA = Emotional awareness; CR = Cognitive reappraisal; S = Suppression; R = Resilience.

Table 7
Direct, indirect, and total effects on resilience: Mediation analysis

	Direct effects	Indirect effects		Totals
		Through CR	Through S	
Boys	.161	.253*	−.041	.373*
Girls	.142	.213*	.048	.307*

Note. *$p < .05$; CR = Cognitive reappraisal; S = Suppression.

Table 8
Differences in the structural model between boys and girls: invariance analysis

Model	χ^2	*df*	χ^2 /*df*	GFI	NFI	CFI	$\Delta\chi^2$	Δ *df*	*p*
Fully constrained	882.96	390	2.26	.911	.936	.971	75.44	22	<.001*
β 1 unconstrained	807.99	369	2.19	.928	.956	.966	0.47	1	.495
β 2 unconstrained	822.36	369	2.23	.926	.950	.959	14.84	1	<.001*
β 3 unconstrained	807.53	369	2.19	.928	.956	.966	0.01	1	.954
β 4 unconstrained	807.59	369	2.19	.929	.956	.966	0.07	1	.789
β 5 unconstrained	807.54	369	2.19	.928	.956	.966	0.02	1	.904

Note. χ2 = Chi-square; *df* = Degrees of Freedom; GFI = Goodness of Fit Index; NFI = Normed Fit Index; CFI = Comparative Fit Index; $\Delta\chi$2 = Change in Chi-square; Δdf = Change in Degrees of Freedom; $p < .05$. The asterisk (*) indicates a significant difference compared to the fully constrained model ($p < .05$). *All models have been compared to the unconstrained model.

coefficients such as Cronbach's alpha (α), McDonald's omega (ω), Average Variance Extracted (AVE), and Composite Reliability (CR) were calculated. Values above α > .70, ω > .70, AVE > .50, and CR > .70 are considered satisfactory (Hair et al., 2017).

Additionally, to assess the measurement model equivalence across both groups, factorial invariance was examined based on sex. Thus, after testing the model fit for each group, a sequential multigroup invariance analysis was conducted, comparing the configural invariance model (no constraints imposed by sex), metric invariance model, scalar invariance model, and strict invariance model. To compare these models, changes in CFI (ΔCFI), TLI (ΔTLI), and RMSEA (ΔRMSEA) were examined. Values of ΔCFI < .01, ΔTLI < .01, and ΔRMSEA < 0.015 are considered indicators of group invariance (Chen, 2007).

Regarding the structural model, it was analyzed using the maximum likelihood estimation method, where a parametric bootstrapping process was implemented to reduce the standard error associated with regression calculations. Direct, indirect, and total effects were calculated for both groups, and model fit indicators were evaluated, including Goodness of Fit (GFI), Normed Fit Index (NFI), CFI, and RMSEA. Acceptable values are typically GFI > .90, NFI > .90, CFI > .90, and RMSEA > .06 (Hu & Bentler, 1999).

Finally, to examine group differences in the structural model, a structural invariance analysis was conducted by comparing the ünconstrainedm̈odel with the f̈ully constrainedm̈odel and five other models, one for each path in the structural model. In this case, the significance of the chi-square increment ($\Delta\chi$2) between models was examined.

Results

Descriptive statistics

Group comparison statistics: independent samples t-test

Table 1 presents the descriptive statistics for the constructs included in the model. The scores shown correspond to the original values obtained from the different instruments.

The Independent Samples *t*-test (see Table 2) reveals that the male group obtained significantly higher scores for the constructs *Emotional awareness* ($t = 2.714$, $p = .007$) and *resilience* ($t = 5.271$, $p < .001$).

Correlation statistics

The Pearson correlation statistics indicate that, in the case of boys, *emotional awareness* is directly related to *cognitive reappraisal* and *resilience*. On the other hand, *suppression* maintains a positive relationship with *cognitive reappraisal*. There is also an inverse relationship between *resilience* and *suppression*. For girls, the test shows that *emotional awareness* is positively related to *cognitive reappraisal* and *resilience*. Regarding *cognitive reappraisal*, there is a positive relationship with *resilience*. On the other hand, *suppression* exhibits an inverse relationship with *emotional awareness* and *resilience* (see Table 3).

Structural equation model

Measurement model testing and factorial invariance

Following Anderson and Gerbing (1988), Confirmatory Factor Analysis (CFA) was conducted to assess the validity and acceptance of the measurement model for both groups (Table 4). According to Nunnally (1978), the indicators of Cronbach's alpha (α), McDonald's omega (ω), and composite reliability (CR) show adequate values of reliability and internal consistency. Regarding the discriminant validity of the instruments, although the values of Average Variance Extracted (AVE) do not exceed .05, they are all higher than the interconstruct correlations, thus considered acceptable (Fornell & Larcker, 1981). Finally, concerning standardized factor loadings, all indicators have shown values higher than .50 and a significance level lower than .001, except for the R2 indicator (related to the resilience construct). Therefore, this indicator has been excluded from further analyses (Fornell & Larcker, 1981).

The model fit indicators (Table 5) demonstrate an acceptable fit for both the boys' and girls' groups. Moreover, comparisons between models with different types of restrictions have shown an acceptable level of factorial invariance, suggesting that the understanding of the indicators comprising the different instruments is similar for both groups.

Results of the structural equation model analysis

Direct effects

According to the criteria established in the data analysis section, the structural equation model applied to the total sample indicates a satisfactory fit between the proposed model and the data ($\chi2 = 1025.34$, $df = 450$, $\chi2/df = 2.28$, GFI = .929, CFI = .925, NFI = .892, RMSEA = .060, SRMR = .070). Regarding the group of boys, the model explains 30% of the variance for the *cognitive reappraisal* construct, 7% of the variance for the *suppression* construct, and 30% of the variance for the *resilience*. For girls, the model explains 31% of the variance for the *cognitive reappraisal*, 8% of the variance for the *suppression* construct, and 28% of the variance for the *resilience* construct. Figure 2 displays the diagram of the structural equation analysis along with their respective standardized path coefficients (β, $*p < .05$, with boys' scores in green and girls' scores in orange) and explained variance (R2).

Table 6 displays the standardized parameters extracted from the different relationships comprising the structural model. For the boys' group, the model shows a significant and direct effect of the *emotional awareness* construct on the *cognitive reappraisal* and *suppression* constructs. Additionally, the *cognitive reappraisal* construct exhibits a significant and direct effect on the *resilience* construct. In the case of girls, while the magnitude of the observed effects between the *emotional awareness* construct on *cognitive reappraisal* and *cognitive reappraisal* on *resilience* is similar to that observed in the boys' group, the effect of *emotional awareness* on *suppression* is of similar intensity but in the opposite direction.

Indirect and total effects: Mediation analysis

In order to understand how the following constructs: *emotional awareness, cognitive reappraisal and suppression* explain the observed variability in *resilience* construct through both direct and indirect effects, the following structural equation has been formulated: $R = EA + CR + S + e$

Table 7 presents the direct, indirect, and total effects that the model has on the *resilience* construct. The results show that, for both the male and female groups, while the *emotional awareness* construct does not have a significant direct effect on *resilience*, the mediating effect of the *cognitive reappraisal* construct makes the total effect significant. The intensity of these effects is similar for both groups.

Hypothesis testing for group invariance

Table 8 presents the results of the invariance analysis conducted to examine differences in the structural model between boys and girls. The results show differences between the unconstrained and fully constrained model, specifically in the structural relationship β2. This difference suggests that the effect of *emotional awareness* on *suppression* (refer to Table 7 for the magnitude of the direct effects for both groups) is significantly different between boys and girls. For boys, the effect is positive, while for girls, it is negative.

Discussion

This study explores how the constructs of *emotional awareness*, *cognitive reappraisal*, and *suppression* contribute, through both direct and indirect effects, to understanding the variations observed in *resilience* among individuals categorized by their gender. Regarding Hypothesis 1, which suggests a positive direct impact of *emotional awareness* on *resilience*, the results of this study did not reveal a statistically significant direct effect for either gender. These findings contrast with prior research that supports the existence of such an effect (Jacobs & Keegan, 2022; Kinman & Grant, 2011; Lee et al., 2019). However, it is worth considering that the literature has only partially explored the impact of *emotional awareness* on the resilience of adolescents, and previous studies have focused on different samples, including adults who have or have not experienced abuse, elite athletes, and emergency service personnel. Although research demonstrates that emotional competencies influence *resilience*, the results suggest that *emotional awareness* alone does not directly influence the resilience capacities of adolescents.

The second hypothesis of this study posits that *emotional awareness* is positively related to the use of adaptive emotional regulation strategies, such as *cognitive reappraisal*, and negatively related to the use of maladaptive emotional regulation strategies, such as *emotional suppression*. The results indicate a significant positive effect of *emotional awareness* on *cognitive reappraisal* of similar

magnitude for both genders, aligning with previous studies that have observed individuals who have a better ability to identify their emotions tend to regulate them using adaptive strategies like *cognitive reappraisal* (Aldao et al., 2010; Megías-Robles et al., 2019; Subic-Wrana et al., 2014). These findings suggest that *emotional awareness* serves as a facilitating factor in the effective use of the *cognitive reappraisal* strategy among adolescents, regardless of their sex.

Moreover, a significant effect of *emotional awareness* on *emotional suppression* has also been found, although the valence of this relationship differs for each gender. For boys, the effect is positive, while for girls, it is negative. These findings reinforce the findings of Santos et al. (2021), suggesting that there are gender differences in the way young individuals select emotional regulation strategies. Additionally, these results complement works such as those of Garnefski and Kraaij (2018) or Zimmermann and Iwanski (2014), which indicate that girls tend to rely on seeking social support, rumination, or acceptance, while boys tend to lean towards avoidance or passivity. Consequently, these results partially confirm the second hypothesis, given the differences observed based on the participants' gender, thus confirming the fifth hypothesis that posits gender differences in the magnitude of the relationships among the studied constructs. In this case, gender acts as a moderator in the relationship between *emotional awareness* and *emotional suppression*, but not in the relationship between *emotional awareness* and *cognitive reappraisal*.

Thirdly, it was hypothesized that *cognitive reappraisal* has a direct positive effect on adolescents' resilience, while *emotional suppression* has a direct but negative effect on resilience. The results support this hypothesis, as *cognitive reappraisal* demonstrates a significant effect on resilience for both genders. However, the effect of *suppression* on resilience is non-significant. These findings align with previous research by Mouatsou and Koutra (2021) and suggest that the *cognitive reappraisal* strategy facilitates adaptive coping in the face of adversity and the development of personal and social resources and ultimately contributes to resilience. Additionally, *cognitive reappraisal* is a coping strategy commonly associated with resilience, as indicated by various studies (e.g., Chen, Cheung et al., 2018; Ford et al., 2017; Mestre et al., 2017; Polizzi & Lynn, 2021).

In contrast, according to results, *emotional suppression* has an indirect effect on resilience for both genders, although it is not significant in the present study. While previous studies have shown that individuals who frequently hide their emotions tend to have lower optimism, life satisfaction and well-being levels (Chervonsky & Hunt, 2017; Gross & John, 2003), the results of this study, although showing a trend, are not statistically significant. This unexpected outcome may be due to the type of data collection or participants' self-reporting, who may not be aware of their suppressed emotions. The literature indicates that *emotional suppression*, in some cases, is accompanied by low *emotional awareness*, which explains why it is less reported than other more adaptive strategies such as reappraisal (Subic-Wrana et al., 2014). Furthermore, given the maladaptive nature of this emotional regulation strategy, possibly it does not involve a modification of the meaning or evaluation of negative emotions but only an inhibition of their external expression. This fact may hinder recovery from adversity and have a lesser impact on resilience compared to other more cognitive or behavioral strategies (Chen, Chen et al., 2018; Karreman & Vingerhoets, 2012).

The fourth hypothesis of this study focuses on the mediating role of emotional regulation strategies (*cognitive reappraisa*l and *suppression*) in the relationship between *emotional awareness* and *resilience*. As discussed earlier, *emotional awareness* does not have a direct effect on *resilience* in either group regarding sex, but it operates through the mechanisms of emotional regulation strategies. A significant and positive mediating effect of cognitive reappraisal is observed, with similar magnitude for both boys and girls, while the mediating effect of *suppression* is not significant for either sex. These results partially confirm the fourth hypothesis, as *cognitive reappraisal* exerts a significant positive mediating effect that enhances the relationship between *emotional awareness* and *resilience*, while the mediating effect of *suppression* is not significant.

These findings are consistent with the hypotheses and in line with the theories of Bar-On (2006), Bisquerra and Pérez-Escoda (2007), and Salovey and Mayer (2002). All of these theories consider *emotional awareness* as an essential skill of emotional intelligence, serving as the foundation for developing more complex emotional competencies such as emotional regulation. Therefore, *emotional awareness* is seen as a prerequisite for accessing other branches that involve processes to facilitate thinking, understand the meaning and regulation of emotions, and promote well-being (Salovey & Mayer, 2002). In essence, these findings suggest that *emotional awareness* is a necessary condition for young people to effectively utilize adaptive emotional regulation strategies like *cognitive reappraisal*, regardless of their sex. Thus, emotional regulation programs based on *cognitive reappraisal* need to consider including exercises targeting *emotional awareness* for the development of *resilience* (Bonanno & Mancini, 2008; Subic-Wrana et al., 2014).

In a different way, *suppression* exerts a non-significant negative indirect effect between *emotional awareness* and *resilience*. According to the literature, individuals who use this strategy tend to avoid expressing their feelings, often experience more negative emotions than positive ones, and report lower levels of well-being and life satisfaction (Chervonsky & Hunt, 2017; Gross & John, 2003). Given its maladaptive nature, some studies suggest that the use of *suppression* can hinder the ability to utilize resilient resources (Mouatsou & Koutra, 2021; Sünbül & Güneri, 2019; Troy & Mauss, 2011). If emotional *suppression* is employed as an emotional regulation strategy, it becomes more challenging to overcome stressful experiences and reduce negative emotions, and there may also be difficulties in developing emotional awareness (Ramos et al., 2007). As a result, difficulties in developing adaptive emotional regulation strategies may arise, ultimately diminishing resilience. Although several studies have found a negative relationship between emotional suppression and resilience (e.g., Olatunji et al., 2014; Peng et al., 2014), the indirect effect of this strategy on *emotional awareness* and *resilience* may not be significant due to the influence of other factors such as self-esteem, satisfaction of basic psychological needs, or social support (González-Calvo et al., 2019; Mouatsou & Koutra, 2021; Southwick et al., 2016).

The present study provides important insights into the relationship between *emotional awareness* and *resilience*, as well as the processes through which emotional regulation strategies (*cognitive reappraisal* and *suppression*) mediate this relationship. However, to properly interpret these results, it is important to consider some limitations. Firstly, the study provides information about how the constructs are related to each other in terms of mode and intensity, but it does not provide a definitive explanation of the causal agents underlying these relationships. As a result, boys and girls may show similar magnitude of relationships between the studied constructs, but they may be motivated by different factors. Secondly, the study does not address the dynamic and interactive nature of the observed constructs. Future research should explore these relationships using longitudinal experimental designs to study their possible variation over time and apply statistical procedures to analyze the interactive effect of the constructs. Additionally, it should be noted that the reliability of the ERQ-CA is at the limit, which cautions against generalizing the results. Lastly, while this study aims to provide a general understanding of how the constructs operate on resilience in the adolescent population, the contextual and cultural characteristics of the participants are relatively homogeneous and may not be extrapolatable to different sociocultural contexts.

These results provide a useful guide for designing programs based on emotional competencies that can help adolescents develop the resilient resources necessary to effectively face life's challenges. In light of these findings, implementing emotional education programs in educational settings could not only increase *resilience* in young people but also have a substantial positive impact on the efficiency and sustainability of healthcare systems. Additionally, it is essential to consider incorporating a sex-based approach in these programs, as the present study shows variations in the relationships between the constructs depending on the sex of the participants.

Conclusion

The present study provides a comprehensive quantitative understanding of the effect of *emotional awareness* on *resilience*, as well as the mediating effect of the emotional regulation strategies of *cognitive reappraisal* and *suppression* in this relationship for a sample of Spanish adolescents. In summary, three general ideas can be derived from the obtained results.

The first idea suggests that *emotional awareness* alone does not have a direct effect on the resilience skills of adolescents. The second idea highlights the sex-based differences in the effect of emotional awareness on emotional regulation strategies: while the effect is similar for both sexes in *cognitive reappraisal*, it is positive for boys and negative for girls in *suppression*. The third idea emphasizes the need to consider *emotional awareness* as a necessary condition for developing adaptive emotional regulation strategies, such as *cognitive reappraisal*, in the design of programs that promote *resilience*. These findings provide a useful guide for designing programs based on emotional competencies that can help adolescents develop the necessary resilient resources to effectively face life's challenges.

References

Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review*, *30*(2), 217–237. https://doi.org/10.1016/j.cpr.2009.11.004

Alkım, A. R. I., & Çarkit, E. (2020). Investigation of resilience in terms of gender: A meta-analysis study. *Research on Education and Psychology*, *4*(Special Issue), 34–52.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411–423. https://doi.org/10.1037/0033-2909.103.3.411

Asociación Médica Mundial. (2013). *Declaración de Helsinki de la AMM – Principios éticos para las investigaciones médicas en seres humanos*. https://www.wma.net/es/policies-post/declaracion-de-helsinki-de-la-amm-principios-eticos-para-las-investigaciones-medicas-en-seres-humanos/

Bajgar, J., Ciarrochi, J., Lane, R., & Deane, F. P. (2005). Development of the levels of emotional awareness scale for children (LEAS-C). *British Journal of Developmental Psychology*, *23*(4), 569–586.

Banyard, V., Hamby, S., & Grych, J. (2017). Health effects of adverse childhood events: Identifying promising protective factors at the intersection of mental and physical well-being. *Child Abuse and Neglect*, *65*, 88–98. https://doi.org/10.1016/j.chiabu.2017.01.011

Bar-On, R. (2006). The Bar-On model of emotional-social intelligence (ESI)1. *Psicothema*, *18*, 13–25.

Bisquerra, R., & Pérez-Escoda, N. (2007). Las competencias emocionales. *Educación XX1*, *10*, 61–82. https://doi.org/10.5944/educxx1.1.10.297

Bonanno, G. A., & Mancini, A. D. (2008). The human capacity to thrive in the face of potential trauma. *Pediatrics*, *121*(2), 369–375. https://doi.org/10.1542/peds.2007-1648

Cabello, R., Salguero, J. M., Fernández-Berrocal, P., & Gross, J. J. (2013). A Spanish adaptation of the emotion regulation questionnaire. *European Journal of Psychological Assessment*, *29*(4), 234–240. https://doi.org/10.1027/1015-5759/a000150

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, *14*(3), 464–504. https://doi.org/10.1080/10705510701301834

Chen, S., Chen, T., & Bonanno, G. A. (2018). Expressive flexibility: Enhancement and suppression abilities differentially predict life satisfaction and psychopathology symptoms. *Personality and Individual Differences*, *126*, 78–84. https://doi.org/10.1016/j.paid.2018.01.010

Chen, X., Cheung, H. Y., Fan, X., & Wu, J. (2018). Factors related to resilience of academically gifted students in the Chinese cultural and educational environment. *Psychology in the Schools*, *55*(2), 107–119. https://doi.org/10.1002/pits.22044

Chervonsky, E., & Hunt, C. (2017). Suppression and expression of emotion in social and interpersonal outcomes: A meta-analysis. *Emotion*, *17*(4), 669–683. https://doi.org/10.1037/emo0000270

Chmitorz, A., Kunzler, A., Helmreich, I., Tüscher, O., Kalisch, R., Kubiak, T., Wessa, M., & Lieb, K. (2018). Intervention studies to foster resilience: A systematic review and proposal for a resilience framework in future intervention studies. *Clinical Psychology Review*, *59*, 78–100. https://doi.org/10.1016/j.cpr.2017.11.002

Cho, G., Hwang, H., Sarstedt, M., & Ringle, C. h. M. (2020). Cutoff criteria for overall model fit indexes in generalized structured component analysis. *Journal of Marketing Analytics*, *8*(4), 189–202. https://doi.org/10.1057/s41270-020-00089-1

Cicchetti, D. (2010). Resilience under conditions of extreme stress: A multilevel perspective. *World Psychiatry*, *9*, 145–154. https://doi.org/10.1002/j.2051-5545.2010.tb00297.x

Connor, K. M., & Davidson, J. R. T. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, *18*(2), 76–82. https://doi.org/10.1002/da.10113

Dray, J., Bowman, J., Campbell, E., Freund, M., Wolfenden, L., Hodder, R. K., McElwaine, K., Tremain, D., Bartlem, K., Bailey, J., Small, T., Palazzi, K., Oldmeadow, C., & Wiggers, J. (2017). Systematic review of universal resilience-focused interventions targeting child and adolescent mental health in the school setting. *Journal of the American Academy of Child and Adolescent Psychiatry*, *56*(10), 813–824. https://doi.org/10.1016/j.jaac.2017.07.780

Ford, B. Q., Karnilowicz, H. R., & Mauss, I. B. (2017). Understanding reappraisal as a multicomponent process: The psychological health benefits of attempting to use reappraisal depend on reappraisal success. *Emotion*, *17*(6), 905. https://doi.org/10.1037/emo0000310

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50.

Garnefski, N., & Kraaij, V. (2018). Specificity of relations between adolescents' cognitive emotion regulation strategies and symptoms of depression and anxiety. *Cognition and Emotion*, *32*(7), 1401–1408. https://doi.org/10.1080/02699931.2016.1232698

González-Calvo, G., Hortigüela-Alcalá, D., Hernando-Garijo, A., & Pérez-Pueyo, Á. (2019). The coexistence plan at a secondary school: Analysis based on the voices of students and teachers. *Qualitative Report*, *24*(3), 572–585. https://doi.org/10.46743/2160-3715/2019.3684

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271

Gross, J. J. (2002). Emotion regulation: Affective, cognitive, and social consequences. *Psychophysiology*, *39*(3), 281–291. https://doi.org/10.1017/s0048577201393198

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, *26*(1), 1–26. https://doi.org/10.1080/1047840x.2014.940781

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*(2), 348–362. https://doi.org/10.1037/0022-3514.85.2.348

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2017). *Multivariate data analysis*. Cengage Learning.

Hartman, S. D., Wasieleski, D. T., & Whatley, M. A. (2017). Just breathe: The effects of emotional dysregulation and test anxiety on GPA. *College Student Journal*, *51*(1), 142–150.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1–55.

Huang, C. C., Chen, Y., Jin, H., Stringham, M., Liu, C., & Oliver, C. (2020). Mindfulness, life skills, resilience, and emotional and behavioral problems for gifted low-income adolescents in China. *Frontiers in Psychology*, *11*, 594. https://doi.org/10.3389/fpsyg.2020.00594

Jacobs, E., & Keegan, R. J. (2022). Sustaining optimal performance when the stakes could not be higher: Emotional awareness and resilience in emergency service personnel (with learnings for elite sport). *Frontiers in Psychology*, *13*, Article 891585. https://doi.org/10.3389/fpsyg.2022.891585

John, O. P., & Gross, J. J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality*, *72*(6), 1301–1334. https://doi.org/10.1111/j.1467-6494.2004.00298.x

Karreman, A., & Vingerhoets, A. J. (2012). Attachment and well-being: The mediating role of emotion regulation and resilience. *Personality and Individual Differences*, *53*(7), 821–826. https://doi.org/10.1016/j.paid.2012.06.014

Kinman, G., & Grant, L. (2011). Exploring stress resilience in trainee social workers: The role of emotional and social competencies. *British Journal of Social Work*, *41*(2), 261–275. https://doi.org/10.1093/bjsw/bcq088

Lane, R. D. (2000). Levels of emotional awareness: Neurobiological, psychological and social perspectives. In R. Bar-On, & J. Parker (Eds.), *Handbook of emotional intelligence: Theory, development, assessment and application at home, school, and in the workplace* (pp. 171–191). Jossey-Bass.

Lee, S. W., Won, S., & Jeong, B. (2019). Moderating effect of emotional awareness on the association between maltreatment experiences and resilience. *Personality and individual Differences*, *148*, 38–44. https://doi.org/10.1016/j.paid.2019.05.037

Leys, C., Klein, O., Dominicy, Y., & Ley, C. (2018). Detecting multivariate outliers: Use a robust variant of the Mahalanobis distance. *Journal of Experimental Social Psychology*, *74*, 150–156. https://doi.org/10.1016/j.jesp.2017.09.011

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, *71*, 543–562. https://doi.org/10.1111/1467-8624.00164

Masten, A. S. (2018). Resilience theory and research on children and families: Past, present, and promise. *Journal of Family Theory & Review*, *10*(1), 12–31. https://doi.org/10.1111/jftr.12255

Masten, A. S., & Barnes, A. J. (2018). Resilience in children: Developmental perspectives. *Children*, *5*(7), 98.

Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, *8*(4), 290–300. https://doi.org/10.1177/1754073916639667

Megías-Robles, A., Gutiérrez-Cobo, M. J., Gómez-Leal, R., Cabello, R., Gross, J. J., & Fernández-Berrocal, P. (2019). Emotionally intelligent people reappraise rather than suppress their emotions. *PLoS One*, *14*(8), Article e0220688. https://doi.org/10.1371/journal.pone.0220688

Mestre, J. M., Núñez-Lozano, J. M., Gómez-Molinero, R., Zayas, A., & Guil, R. (2017). Emotion regulation ability and resilience in a sample of adolescents from a suburban area. *Frontiers in Psychology*, *8*, 1980. https://doi.org/10.3389/fpsyg.2017.01980

Mouatsou, C., & Koutra, K. (2021). Emotion regulation in relation with resilience in emerging adults: The mediating role of self-esteem. *Current Psychology*. https://doi.org/10.1007/s12144-021-01427-x

Navarro, J., Vara, M. D., Cebolla, A., & Baños, R. M. (2018). Validación psicométrica del cuestionario de regulación emocional (ERQ-CA) en población adolescente española. *Revista de Psicología Clínica con Niños y Adolescentes*, *5*(1), 9–15. https://doi.org/10.21134/rpcna.2018.05.1.1

Nolen-Hoeksema, S., & Aldao, A. (2011). Gender and age differences in emotion regulation strategies and their relationship to depressive symptoms. *Personality and Individual Differences*, *51*(6), 704–708. https://doi.org/10.1016/j.paid.2011.06.012

Nunnally, J. C. (1978). An overview of psychological measurement. In B. B. Wolman (Ed.), *Clinical diagnosis of mental disorders: A handbook* (pp. 97–146). Springer. https://doi.org/10.1007/978-1-4684-2490-4_4

Olatunji, B. O., Armstrong, T., Fan, Q., & Zhao, M. (2014). Risk and resiliency in posttraumatic stress disorder: Distinct roles of anxiety and disgust sensitivity. *Psychological Trauma: Theory, Research, Practice, and Policy*, *6*(1), 50–55. https://doi.org/10.1037/a0029682

Overton, W. F. (2013). A new paradigm for developmental science: Relationism and relational-developmental systems. *Applied Developmental Science*, *17*(2), 94–107. https://doi.org/10.1080/10888691.2013.778717

Peña-Sarrionandia, A., Mikolajczak, M., & Gross, J. J. (2015). Integrating emotion regulation and emotional intelligence traditions: A meta-analysis. *Frontiers in Psychology*, *6*, 160. https://doi.org/10.3389/fpsyg.2015.00160

Peng, L., Li, M., Zuo, X., Miao, Y., Chen, L., Yu, Y., Liu, B., & Wang, T. (2014). Application of the Pennsylvania resilience training program on medical students. *Personality and Individual Differences*, *61*, 47–51. https://doi.org/10.1016/j.paid.2014.01.006

Pérez-Escoda, N., López-Cassà, E., Alegre, A., & Álvarez-Justel, J. (2022). Cuestionario de Desarrollo Emocional para la Educación Secundaria (CDE-SEC). *Informe de construcción y validación del cuestionario) Documento de uso interno del Grup de Recerca en Orientació Psicopedagògica. Barcelona.*

Pinto, T. M., Laurence, P. G., Macedo, C. R., & Macedo, E. C. (2021). Resilience programs for children and adolescents: A systematic review and meta-analysis. *Frontiers in Psychology*, 5406. https://doi.org/10.3389/fpsyg.2021.754115

Polizzi, C. P., & Lynn, S. J. (2021). Regulating emotionality to manage adversity: A systematic review of the relation between emotion regulation and psychological resilience. *Cognitive Therapy and Research*, 1–21. https://doi.org/10.1007/s10608-020-10186-1

Ramos, N. S., Fernandez-Berrocal, P., & Extremera, N. (2007). Perceived emotional intelligence facilitates cognitive-emotional processes of adaptation to an acute stressor. *Cognition and Emotion*, *21*(4), 758–772. https://doi.org/10.1080/02699930600845846

Rodríguez-Rey, R., Alonso-Tapia, J., & Hernansaiz-Garrido, H. (2016). Reliability and validity of the Brief Resilience Scale (BRS) Spanish Version. *Psychological Assessment*, *28*(5), 101–110. https://doi.org/10.1037/pas0000191

Rutter, M. (2007). Resilience, competence, and coping. *Child Abuse & Neglect*, *31*(3), 205–209. https://doi.org/10.1016/j.chiabu.2007.02.001

Sætren, S. S., Sütterlin, S., Lugo, R. G., Prince-Embury, S., & Makransky, G. (2019). A multilevel investigation of resiliency scales for children and adolescents: The relationships between self-perceived emotion regulation, vagally mediated heart rate variability, and personal factors associated with resilience. *Frontiers in Psychology*, *10*, 438. https://doi.org/10.3389/fpsyg.2019.00438

Salanova, M. (2022). *Resiliencia ¿cómo me levanto después de caer*. Shackleton Books.

Salovey, P., & Mayer, J. D. (2002). Emotional intelligence. *Imagination, Cognition and Personality*, *9*(3), 185–211. https://doi.org/10.2190/dugg-p24e-52wk-6cdg

Santos, A. C., Simões, C., Cefai, C., Freitas, E., & Arriaga, P. (2021). Emotion regulation and student engagement: Age and gender differences during adolescence. *International Journal of Educational Research*, *109*, Article 101830. https://doi.org/10.1016/j.ijer.2021.101830

Schäfer, J. Ö., Naumann, E., Holmes, E. A., Tuschen-Caffier, B., & Samson, A. C. (2017). Emotion regulation strategies in depressive and anxiety symptoms in youth: A meta-analytic review. *Journal of Youth and Adolescence*, *46*, 261–276. https://doi.org/10.1007/s10964-016-0585-0

Southwick, S. M., Sippel, L., Krystal, J., Charney, D., Mayes, L., & Pietrzak, R. (2016). Why are some individuals more resilient than others: The role of social support. *World Psychiatry*, *15*(1), 77. https://doi.org/10.1002/wps.20282

Subic-Wrana, C., Beutel, M. E., Brähler, E., Stöbel-Richter, Y., Knebel, A., Lane, R. D., & Wiltink, J. (2014). How is emotional awareness related to emotion regulation strategies and self-reported negative affect in the general population? *PLoS One*, *9*(3), Article e91846. https://doi.org/10.1371/journal.pone.0091846

Sünbül, Z. A., & Güneri, O. Y. (2019). The relationship between mindfulness and resilience: The mediating role of self-compassion and emotion regulation in a sample of underprivileged Turkish adolescents. *Personality and Individual Differences*, *139*, 337–342. https://doi.org/10.1016/j.paid.2018.12.009

Troy, A. S., & Mauss, I. B. (2011). Resilience in the face of stress: Emotion regulation as a protective factor. In S. M. Southwick, B. T. Litz, D. Charney, & M. J. Friedman (Eds.), *Resilience and mental health: Challenges across the lifespan* (pp. 30–44). University Press. https://doi.org/10.1017/cbo9780511994791.004

Vaughan, E., Koczwara, B., Kemp, E., Freytag, C., Tan, W., & Beatty, L. (2019). Exploring emotion regulation as a mediator of the relationship between resilience and distress in cancer. *Psychooncology*, *28*(7), 1506–1512. https://doi.org/10.1002/pon.5107

Wills, T. A., Simons, J. S., Sussman, S., & Knight, R. (2016). Emotional self-control and dysregulation: A dual-process analysis of pathways to externalizing/internalizing symptomatology and positive well-being in younger adolescents. *Drug and Alcohol Dependence*, *163*, 37–45. https://doi.org/10.1016/j.drugalcdep.2015.08.039

Zimmermann, P., & Iwanski, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood: Age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development*, *38*(2), 182–194. https://doi.org/10.1177/0165025413515405

Zlomke, K. R., & Hahn, K. S. (2010). Cognitive emotion regulation strategies: Gender differences and associations to worry. *Personality and Individual Differences*, *48*(4), 408–413. https://doi.org/10.1016/j.paid.2009.11.007