

How Does Social Support and Emotional Intelligence Enhance Life Satisfaction Among Adolescents? A Mediational Analysis Study

Lorea Azpiazu¹, Iratxe Antonio-Agirre², Arantza Fernández-Zabala², Naiara Escalante³

¹Evolutionary and Educational Psychology, University of the Basque Country (UPV/EHU), Donostia-San Sebastian, Spain; ²Evolutionary and Educational Psychology, University of the Basque Country (UPV/EHU), Vitoria-Gasteiz, Spain; ³Educacion Science, University of the Basque Country (UPV/EHU), Vitoria-Gasteiz, Spain

Correspondence: Lorea Azpiazu, University of the Basque Country (UPV/EHU), Oñati Plaza 3, Donostia-San Sebastian, 20018, Spain, Email lorea.azpiazu@ehu.eus

Introduction: The decline in life satisfaction throughout adolescence has led research to focus on variables that facilitate life satisfaction, such as social support and trait emotional intelligence. However, the relationship dynamics between the main sources of social support (family, friends and teachers), trait emotional intelligence (emotional attention, clarity and repair), and life satisfaction have yet to be elucidated.

Objective: Therefore, the aim of this study is to test and compare a set of structural models that integrate these three variables.

Methods: A sample of 1397 middle school students (48% males, 52% females) with age range 12–16 years ($M = 13.88$, $SD = 1.27$) was selected.

Results: The data showed that trait emotional intelligence significantly mediated the effect of the social support network on life satisfaction, highlighting the greater contribution of family support, emotional clarity, and emotional repair as enabling factors of adolescent well-being.

Discussion: Psychoeducational and social implications of these results are discussed.

Keywords: social support, trait emotional intelligence, life satisfaction, mediation analysis, structural equation models

Introduction

With the emergence of positive psychology,¹ the focus of research has shifted to analyzing the strengths and individual abilities that lead to optimal functioning and enable the positive aspects of life and human existence to be fully articulated.² In this context, life satisfaction has attracted a large amount of interest, since it is representative of subjective wellbeing,³ understood as the global cognitive judgment that individuals make about their own lives.⁴ However, studies have reported a drop in life satisfaction among adolescents,^{5,6} a finding that has prompted researchers to begin to explore the variables that facilitate it, including social support^{7,8} and trait emotional intelligence.^{9,10}

Social support, understood as one's subjective perception of the amount of emotional, practical and informational support received through interactions with other people,¹¹ is one of the main sources of subjective wellbeing^{4,8} and a variable capable of mitigating the effects of difficult or stressful situations.¹² The support provided by close sources, such as family, friends and teachers, is therefore vital for adolescents to feel happy and satisfied with their lives.¹³ However, the exact contribution made by each social support network has yet to be determined.¹⁴ Some studies identify family as the most important wellbeing provider.¹⁵ Others highlight the key role played by people from the school environment, namely teachers and, above all, friends,^{16,17} due to the importance of the peer group during this developmental stage.¹⁸ Moreover, some authors argue that there is an association between all three types of support (family, friends and teachers), with the quality of family support facilitating or hindering the establishment of relationships in other contexts, fostering or interfering with individuals' perceptions of the help provided by friends and teachers.¹⁸

Trait emotional intelligence (EI), defined as the subjectiveness of the emotional experience and beliefs linked to emotional attention, clarity and repair,¹⁹ is considered a valuable predictor of health²⁰ and subjective wellbeing.¹⁰ People with low levels of emotional attention and high levels of emotional clarity and repair also report higher levels of life satisfaction.²¹ Moreover, previous research has shown that these associations are maintained when the progressive model of trait EI is taken into account,^{21–23} with emotional attention influencing emotional clarity and emotional clarity influencing emotional repair.^{21,24}

Although empirical evidence exists of the association among these variables, the specific dynamics of the relationships have yet to be fully determined.^{25,26} This is even more evident in studies that analyze social support, trait EI and life satisfaction together. Previous studies have reported associations among all three variables,²⁷ and there is strong scientific support for considering life satisfaction as an outcome variable indicative of personal adjustment.^{9,28} The results regarding the role played by social support and trait EI in fostering life satisfaction are therefore confusing and heterogeneous.²⁹ This situation is further exacerbated by the fact that few studies have included different sources of support (family, friends and teachers) and all three dimensions of trait EI (emotional attention, clarity and repair) in their explanations of life satisfaction.²⁶

Some authors argue that trait EI may help individuals perceive better support and social skills,^{30,31} which would in turn generate more fruitful social networks, thereby contributing positively to life satisfaction.^{29,32} From this standpoint, trait EI is seen as a type of personal disposition that is positively linked to social support,²⁹ a variable that mediates the association between trait EI and life satisfaction.^{29,33} Emotional clarity and repair promote positive relationships with others and a better perception of the support available in the immediate environment,³³ which in turn results in high levels of life satisfaction.³⁴ The type of mediation at play here has yet to be clarified, mainly due to the scarcity of studies in this field and the tendency to include only the global components of these variables.^{29,35} The few studies that have focused on this question seem to indicate that social support may partially mediate the influence of trait EI on life satisfaction.^{26,29}

Another set of studies view perceived social support as vital to the development of adolescents' identity³⁶ and emotional skills,^{37,38} which in turn contribute to generating a more satisfied perception of their lives.^{21,39} The ecological model⁴⁰ views the three microsystems made up by family, friends and teachers as fundamental to human development, with support from these sources being vital to the acquisition and development of emotional skills,^{39,41} since the feeling of being helped and cared for⁴² becomes a means to increase personal resources and skills, as well as to enhance the emotions necessary to ensure adequate personal adjustment.^{43,44} Lin's⁴² conceptualization of social support indicates the same idea and mentions that the relationships established in each close social context (family, friends and teachers) contribute in a differentiated way to the development of psychosocial skills and individual's adjustment. These types of studies therefore consider trait EI as a variable that mediates the influence of social support on life satisfaction,⁴⁵ even if only partially.²⁸ However, very little empirical evidence exists in this respect, and further exploration of these relationship dynamics is required.

In light of the above, and considering the national and international evidence, the aim of the present study is to analyze a set of nested and non-nested theoretical models in order to determine the relationship dynamics between social support (family, friends and teachers), trait EI (emotional attention, clarity and repair) and life satisfaction (Figure 1). The objective is therefore to analyze the dynamics of the associations that exist among the three variables studied and to determine the most important source of support, in order to make a relevant contribution to the field of positive psychology, which aims to identify those factors that facilitate wellbeing during a stage characterized by a sudden drop in the levels of this variable.^{5,6} Based on previous research, we hypothesize that the M_{2b} model is the most plausible model and will best fit the data.

Method

Participants

Participants were 1397 adolescents from both public (831 students) and semi-private (566 students) schools in the [details removed for blind review]. All students were in compulsory secondary education and were aged between 12 and

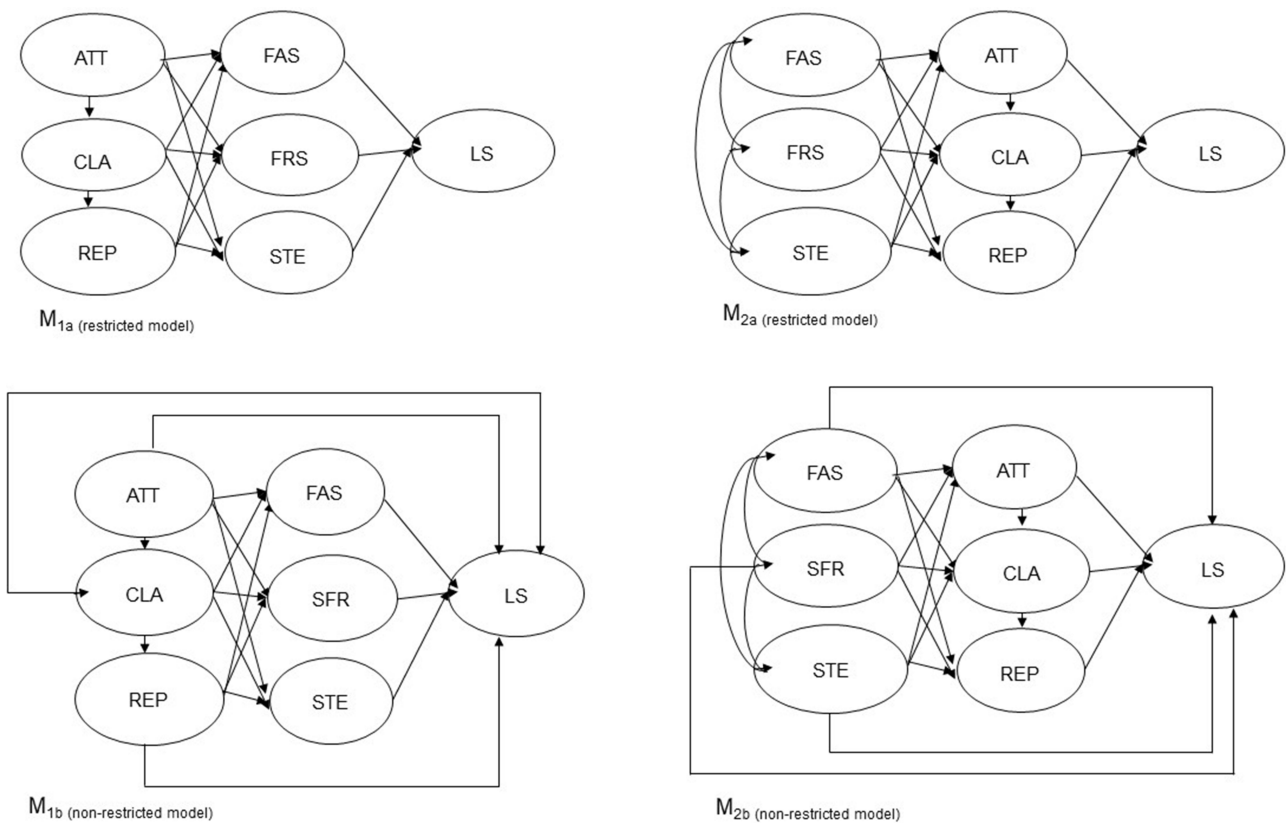


Figure 1 Conceptual diagrams of the proposed theoretical models.

Note: M_{1a} = restricted model, M_{2a} = restricted model, M_{1b} = non-restricted model, M_{2b} = non-restricted model.

Abbreviations: ATT, emotional attention; CLA, emotional clarity; REP, emotional repair; LS, life satisfaction; FAS, family support; SFR, support from friends; STE, support from teachers.

16 years ($M = 13.88$; $SD = 1.27$). In terms of gender distribution, 670 (48%) were boys and 727 (52%) were girls. In terms of age, 831 (59.5%) were in the first two years (key stage one) of secondary education and 566 (40.5%) were in the second two years (key stage two). The socioeconomic and cultural level of the sample was medium. The balance between public and semi-private schools and gender and age of the participants were accurately pursued. Schools and classes were chosen in accordance with availability, with the sample being recruited through incidental sampling.

Instruments

Support from family and friends was measured using the Apoyo Social Percibido de Familia y Amigos- AFA (Support from Family and Friends) Questionnaire.⁴⁶ The scale comprises 15 items rated on a Likert-type scale with 5 response options (1 = never to 5 = always). These items are grouped into two subscales: (1) support from family (8 items), which assesses the perceived availability of family members to chat and provide help, affection and support, as well as satisfaction with the support received (eg, someone in your family supports you when you are at school); and (2) support from friends (7 items), which measures the perceived availability of friends to chat and provide help, affection and support, as well as satisfaction with the support received (eg, you feel satisfied with the support received from friends). The goodness of fit indexes for the questionnaire in this sample were adequate ($CFI = 0.906$, $IFI = 0.906$, $\chi^2_{[df]} = 499.04_{[61]}$, $RMSEA_{[CI\ 90\%]} = 0.072_{[0.066-0.077]}$, $SRMR = 0.054$) and each subscale had adequate reliability indexes (support from family: $\alpha = 0.851$, H coefficient = 0.852; and support from friends: $\alpha = 0.858$, H coefficient = 0.875).

Support from teachers was assessed by the subscale included in the Perception of the School Environment questionnaire.⁴⁷ This instrument, adapted to Spanish,⁴⁸ measures students' perceptions of the overall support they receive from their teachers (eg, Our teachers are pleasant and friendly). 8 items are rated on a 5-point Likert-type scale ranging

from 1 = totally agree to 5 = totally disagree. The reliability and goodness of fit indexes were adequate (CFI = 0.950, IFI = 0.951, $\chi^2_{[df]} = 139_{[20]}$, RMSEA_[CI 90%] = 0.072_[0.062–0.082], SRMR = 0.035, $\alpha = 0.846$, H coefficient = 0.859).

To assess trait EI, we used the Trait Meta-Mood Scale-12 (TMMS-12),⁴⁹ which is the reduced Spanish version of the TMMS.⁵⁰ The scale comprises 12 items and measures trait EI using three subscales: (1) emotional attention, concerning individuals' beliefs about the attention they pay to their emotions (eg, I am usually very conscious of what I feel); (2) emotional clarity, referring to the clarity with which an individual perceives their emotional experience (eg, I can usually define my feelings); and (3) emotional repair, understood as the way in which people manage their emotions (eg, Although I am sometimes sad, I mostly have an optimistic outlook). Items are rated on a 5-point Likert-type scale ranging from 1 (totally disagree) to 5 (totally agree). For this sample, the goodness of fit values were acceptable (CFI = 0.935, IFI = 0.935, $\chi^2_{[df]} = 337.46_{[50]}$, RMSEA_[CI 90%] = 0.064_[0.058–0.071], SRMR = 0.067), as were the reliability indexes (emotional attention: $\alpha = 0.812$, H coefficient = 0.806; emotional clarity: $\alpha = 0.777$, H coefficient = 0.795; emotional repair: $\alpha = 0.696$, H coefficient = 0.800).

Life satisfaction was measured by using the Satisfaction with Life Scale (SWLS),⁵¹ validated in Spanish.⁵² This single-dimensional measure assesses respondents' cognitive and overall appraisals of their life cycle through 5 items (eg, In most ways my life is close to my ideal). Items are rated on a 7-point Likert-type scale ranging from 1 = strongly disagree to 7 strongly agree). For the sample used in the present study, the reliability and goodness of fit indexes were adequate (CFI = 0.983, IFI = 0.983, $\chi^2_{[df]} = 29.56_{[5]}$, RMSEA_[CI 90%] = 0.059_[0.040–0.081], SRMR = 0.023, $\alpha = 0.826$, H coefficient = 0.858).

Procedure

First, we contacted the schools and informed them of the aims of the study. After obtaining institutional authorization and the informed consent of participants' legal guardians, the data were collected in a session lasting approximately 40 minutes. The questionnaires were administered in participants' classrooms by members of the research team. To reduce the likelihood of social desirability bias and insincere responses, participants were informed of the importance of being honest, were assured that their answers would remain confidential, and that their participation was strictly voluntary. The single blind criterion was used to mitigate participants' expectations and reactivity when completing the battery of questionnaires. The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of the [details removed for blind review].

Data Analysis

To calculate missing values, we used the expectation maximization (EM) algorithm and the Markov Chain Monte Carlo (MCMC), in the LISREL 8.8 program. Atypical values were eliminated using the SAS software package.

The descriptive statistics and correlation coefficients were calculated using the SPSS v.22 statistical package. To determine the fit of the measurement models and the structural models tested, we used the EQS v.6.3 statistical program.

To analyze whether the measurement effects hypothesized in the models were significant, we used the steps described by Holmbeck,^{53,54} testing three alternative models: (1) a non-intervened direct model (M_{01} and M_{02}); (2) a restricted model (M_{1a} and M_{1b}); and (3) a non-restricted model (M_{2a} and M_{2b}). We also analyzed the residual covariance matrix and the goodness of fit indexes of the different models:⁵⁵ $\chi^2/df \leq 5.0$; CFI, TLI and IFI ≥ 0.90 ; RMSEA ≤ 0.08 and its confidence interval (CI 90%); and SRMR ≤ 0.08 . To compare non-nested models, we used the AIC and CAIC information criteria, with the model with the lowest values being considered the most parsimonious.⁵⁶ To compare nested models, we used the Chi-squared test, the significance of which is considered indicative of differences in model fit.⁵⁷

Results

Descriptive Analyses and Correlations

As shown in Table 1, scores for trait EI correlated positively with social support from family, friends and teachers, with the association between family support and emotional repair being the strongest ($r = 0.236$, $p < 0.001$). Moreover, social

Table 1 Descriptive Statistics and Correlations

	2	3	4	5	6	7	M	SD
1. Family support	0.330***	0.290***	0.067*	0.222***	0.236***	0.393***	32.77	5.28
2. Support from friends		0.116**	0.172***	0.163***	0.143***	0.217***	28.30	4.48
3. Support from teachers			0.066*	0.190***	0.226***	0.260**	26.30	5.87
4. Emotional attention				0.275***	0.187***	-0.003	24.45	7.11
5. Emotional clarity					0.438***	0.328***	25.10	6.66
6. Emotional repair						0.383***	27.60	6.72
7. Life satisfaction							26.20	5.63

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

support was also positively associated with life satisfaction, with family support again being the contextual variable with the strongest correlations ($r = 0.393$, $p < 0.001$) in all the relationships studied. Positive and significant associations were also found between trait EI and life satisfaction, except in the case of emotional attention ($r = -0.003$, $p > 0.05$).

Structural Equation Models

The suitability of the measurement model ($\chi^2_{[df]} = 2018.06_{[605]}$, $\chi^2/df = 3.23$, TLI = 0.903, CFI = 0.912, IFI = 0.912, SRMR = 0.047, RMSEA_[CI 90%] = 0.041_[0.039–0.043]), and the good fit and significance levels of all the pathways established in the non-intervened direct effect models, M₀₁ (effect of social support on life satisfaction) and M₀₂ (effect of trait EI on life satisfaction), enabled the proposed theoretical models to be tested using the structural equations method. The models hypothesized (Figure 1) were therefore empirically tested and the results are presented in Table 2.

The results revealed that hypothesized M₀₂, namely that which proposed trait EI as the variable mediating the association between social support and life satisfaction, was the one that best fit the data. Although both the restricted structural model (M_{2a}) and the non-restricted model (M_{2b}) returned satisfactory fit indexes, the AIC and CAIC information criteria, as well as the Chi-squared test, indicated that model M_{2b} had a significantly better fit than M_{2a} ($\Delta\chi^2 = 153.41$, $p < 0.000$). The Walt test revealed the need to eliminate the pathways established between the latent factors support from friends-emotional clarity, support from friends-emotional repair, and family support-emotional attention, due to lack of significance, as indeed suggested by theoretical evidence.^{28,39} This result partially coincides with the hypothesis, since M_{2b} is confirmed as the most plausible model, although some paths are no longer significant. Figure 2 shows the standardized regression coefficients of the final structural model (M_{2b}), after these associations were eliminated. The percentage of variance explained for life satisfaction, resulting from the effects of social support and trait EI, was 37.8%.

Direct, Indirect, and Total Effects

The results presented in Table 3 show the influence of trait EI and social support on life satisfaction. Specifically, emotional attention ($\beta_d = -0.124$, $p < 0.01$) was found to negatively influence life satisfaction, whereas emotional clarity ($\beta_d = 0.158$, $p < 0.01$) and emotional repair ($\beta_d = 0.256$, $p < 0.01$) influenced it positively.

Table 2 Comparison of Theoretical Models

	$\chi^2_{[df]}$	χ^2/df	TLI	CFI	IFI	SRMR	RMSEA [CI 90%]	AIC	CAIC
M ₀₁	1232.6325 _[291]	4.24	0.904	0.914	0.914	0.044	0.048 _[0.045–0.051]	650.63	-1166.23
M ₀₂	486.0967 _[112]	4.34	0.931	0.944	0.944	0.057	0.049 _[0.044–0.053]	262.10	-437.18
M _{1a}	2259.2417 _[612]	3.69	0.888	0.897	0.897	0.070	0.044 _[0.046–0.050]	1035.24	-2785.79
M _{1b}	2158.1542 _[609]	3.54	0.894	0.903	0.903	0.067	0.043 _[0.041–0.045]	0.940.15	-2862.15
M _{2a}	2037.2505 _[608]	3.35	0.905	0.911	0.911	0.062	0.041 _[0.039–0.043]	821.25	-2974.81
M _{2b}	1878.1526 _[607]	3.09	0.913	0.920	0.921	0.047	0.039 _[0.037–0.041]	664.15	-3125.66

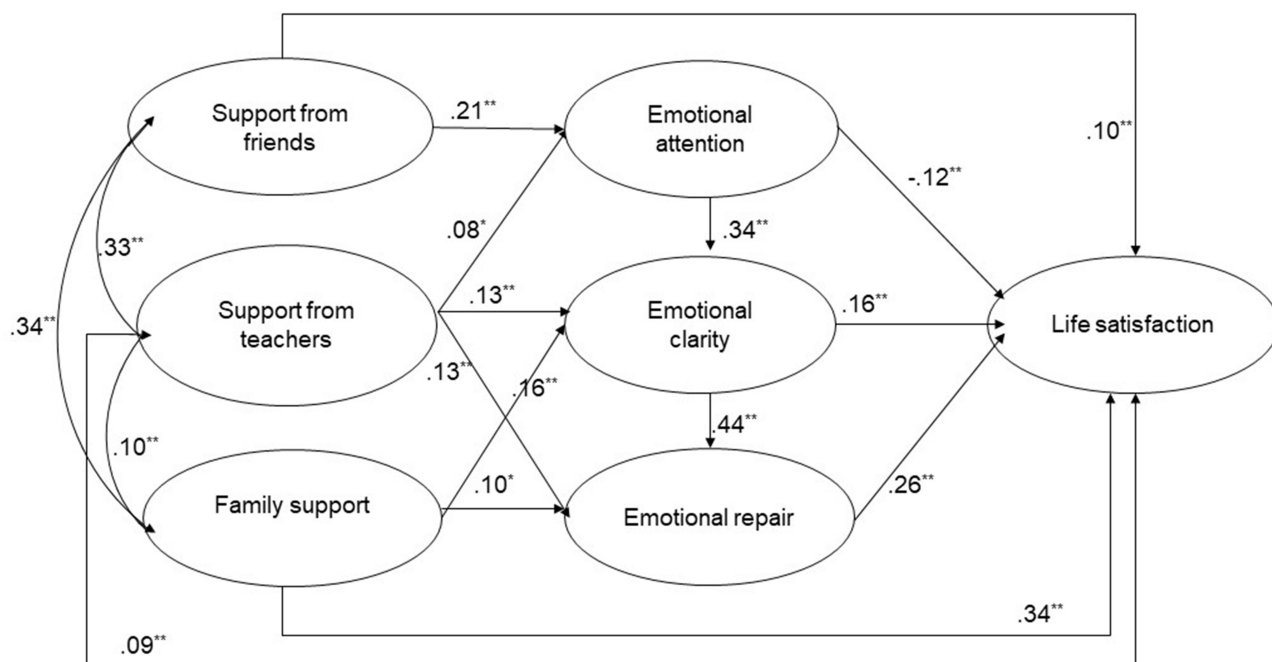


Figure 2 Conceptual diagram and standardized coefficients of the final M_{2b} model.

Note: * $p < 0.05$, ** $p < 0.01$.

Although emotional repair was the trait EI variable that had the strongest direct effect on life satisfaction, emotional clarity was found to have a stronger total influence on that same variable ($\beta_t = 0.272$, $p < 0.01$), since it was mediated by emotional repair. Although small, the indirect effect of emotional attention on life satisfaction is also worth noting. This effect was positive ($\beta_i = 0.091$, $p < 0.01$) and was exercised through emotional clarity.

Family support was the contextual variable that most contributed to life satisfaction ($\beta_d = 0.343$, $p < 0.01$), with the influence in this case being total ($\beta_t = 0.412$, $p < 0.01$). In contrast, the contribution of support from friends ($\beta_d = 0.098$, $p < 0.01$) and support from teachers ($\beta_d = 0.088$, $p < 0.01$) was smaller, although support from teachers had a larger total effect on life satisfaction ($\beta_t = 0.150$, $p < 0.01$).

Support from teachers contributed directly and positively to all the variables that make up trait EI, whereas support from friends only had a direct effect on emotional attention ($\beta_d = 0.216$, $p < 0.01$) and a slight indirect effect on emotional clarity ($\beta_i = 0.072$, $p < 0.01$). Although family support was the contextual variable that contributed most to explaining emotional clarity among adolescents ($\beta_d = 0.163$, $p < 0.01$), only support from teachers was found to do so in relation to emotional repair ($\beta_d = 0.132$, $p < 0.01$). The influence of emotional attention on emotional clarity ($\beta_d = 0.335$, $p < 0.01$), and the influence of emotional clarity on emotional repair ($\beta_d = 0.443$, $p < 0.01$) were stronger than the effect of the contextual variables studied.

Discussion

Adolescence is characterized by a sharp drop in life satisfaction,⁵ due to, among other reasons, the pubertal changes experienced during this developmental stage.^{18,58} It is therefore important to determine which factors promote life satisfaction, in order to foster positive adolescent adjustment. Previous research has highlighted the significant role played by social support (from family, friends and teachers) and trait EI (emotional attention, clarity and repair) in fostering life satisfaction,^{4,8} although the specific dynamics of the relationships which exist between them still need to be determined.^{25,26} Another aspect that requires clarification is the question of which source of social support is most important in this regard,¹⁴ since this will enable the design of more precise and empirically tested strategies for fostering wellbeing.⁵⁹ Within the framework of positive psychology, the aim of the present study was therefore to analyze a set of nested and non-nested theoretical models in order to clarify the association between the variables and to determine the differential contribution made by the principal sources of support within these relationship dynamics.

Table 3 Direct, Indirect and Total Effects of the Final M_{2b} Model

Explained Variable	Standardized Coefficients					
Emotional attention ($R^2 = 0.057$)	β_d	Z_d	β_i	Z_i	β_t	Z_t
Support from friends → Emotional attention	0.216**	6.090	–	–	0.216**	6.090
Support from teachers → Emotional attention	0.082*	2.382	–	–	0.082*	2.382
Emotional clarity ($R^2 = 0.183$)	β_d	Z_d	β_i	Z_i	β_t	Z_t
Family support → Emotional clarity	0.163**	4.267	–	–	0.163**	4.267
Support from friends → Emotional clarity	–	–	0.072**	4.942	0.072**	4.942
Support from teachers → Emotional clarity	0.115**	3.196	0.027*	2.266	0.143**	3.674
Emotional attention → Emotional clarity	0.335**	8.922	–	–	0.335**	8.922
Emotional repair ($R^2 = 0.275$)	β_d	Z_d	β_i	Z_i	β_t	Z_t
Family support → Emotional repair	0.095*	2.412	0.072**	3.854	0.167**	3.837
Support from friends → Emotional clarity	–	–	0.032**	4.509	0.032**	4.509
Support from teachers → Emotional repair	0.132**	3.760	0.063**	3.510	0.195**	5.126
Emotional clarity → Emotional repair	0.443**	10.650	–	–	0.148**	10.650
Emotional attention → Emotional repair	–	–	0.148**	6.897	0.443**	6.897
Life satisfaction ($R^2 = 0.378$)	β_d	Z_d	β_i	Z_i	β_t	Z_t
Emotional attention → Life satisfaction	–0.124**	–3.518	0.091**	5.544	–0.033	–1.011
Emotional clarity → Life satisfaction	0.158**	3.907	0.113**	5.477	0.272**	7.344
Emotional repair → Life satisfaction	0.256**	6.133	–	–	0.256**	6.133
Family support → Life satisfaction	0.343**	7.878	0.068**	4.117	0.412**	8.382
Support from friends → Life satisfaction	0.098**	2.768	–0.007	–1.000	0.091*	2.393
Support from teachers → Life satisfaction	0.088**	2.685	0.062**	4.331	0.150**	4.179

Note: * $p < 0.05$, $z = 1.96$; ** $p < 0.01$, $z = 2.56$.

Of the four hypothesized theoretical models, the results of the present study indicate that the one in which emotional attention, clarity and repair were considered to partially mediate the influence of social support on life satisfaction best fit the data. This model was hypothesized to be the most plausible, although the hypothesis has been partially confirmed because some routes have turned out not to be significant. According to some authors,³⁶ individual and social assets may share common characteristics and it is likely that it is the individual ones that develop within a social context, with social networks constituting a source of social capital that serves as a bridge for processes that support competence, personal growth and wellbeing. This is consistent with the ecological model of human development,⁴⁰ as well as with the body of studies that highlight the importance of feeling cared for, looked after and loved by one's close support network in the development of emotional strategies that contribute to wellbeing.^{44,60} Indeed, these emotional skills seem to develop through observational learning, modeling and social reference;⁶¹ this leads to an increase in perceived emotional intelligence that, in turn, impacts life satisfaction.²¹

Consistently with that reported in the extant literature,²¹ the present study found that emotional attention has a negative impact on life satisfaction, whereas emotional clarity and repair have a positive influence. This is perhaps due to the fact that paying too much attention to emotions may generate ruminative thoughts that hamper adaptive processes.⁶² Although emotional repair was found to have the strongest direct influence on life satisfaction, the total effect of emotional clarity was slightly stronger,²³ due to the mediating role of emotional repair in the association between this variable and life satisfaction. This highlights the importance of emotional repair, accompanied by good emotional understanding, in fostering wellbeing, thereby corroborating the progressive model of trait EI.^{21,22,24}

The results of our study also revealed that different sources of support impact the various components of trait EI in a differential manner, since the effect of the support provided varied in accordance with its source, type and the extent to which it was adjusted to individual needs.³⁸ Specifically, support from friends was found to have a relevant effect on emotional attention, whereas family support and support from teachers had a significant impact on emotional clarity and

repair,^{28,39} with the effect of family support on emotional clarity being particularly strong.⁴³ Adolescence is characterized by a gradual separation from parental control and guidance, as well as by the development of a high level of receptivity to peers and the immediate environment,¹⁸ which explains why support from friends was the variable that most contributed to fostering emotional attention, since, during this period, friends become an important reference that facilitate emotional disposition.

In contrast, the search for support in adults may be considered an instrumental strategy through which adolescents seek advice and guidance for clarifying and regulating their emotions effectively.^{28,43} It therefore seems that seeking out adults with extensive life experience influences adolescents' ability to interpret their own emotions, as well as their perceived capacity to regulate those feelings.^{28,43} Indeed, previous research has highlighted lack of social support from significant adults (such as parents and teachers) as one of the main reasons behind inadequate emotional clarity and repair, since social support is an effective means of helping adolescents learn to understand and handle their emotions.^{37,43}

One novel finding worth highlighting is the direct^{4,8,13} and indirect influence of social support on life satisfaction, mediated by trait EI, as indeed suggested by that reported in previous studies.^{28,45} Specifically, the present study found that the total effect of support from teachers was almost twice as strong as that of support from friends, a finding that reveals the importance of the mediating role played by trait EI in the relationship between support from teachers and life satisfaction.²⁸ The results therefore indicate that teachers are a more important source of support for wellbeing when adolescents perceive that they help them manage their emotional skills intelligently.⁶³

The results of our study point to family support as the contextual variable that contributes most to life satisfaction, followed by support from teachers and, finally, support from friends. This finding is consistent with those who found the same association in the majority of the 42 countries they analyzed.¹⁴ Although friends become more important during adolescence,¹⁸ previous research has also found that the peer group can generate social pressure and give rise to maladaptive behavior,⁶⁴ which would explain the low level of influence found in the present study. It seems that adolescents continue to depend on the adults around them,¹⁹ especially those in their immediate family, for emotional and instrumental support, since their trust and proximity foster empathic communication dynamics that provide emotional and psychosocial resources³⁶ and help promote mental health.¹⁹

To these complex relationship dynamics, we must also add the associations found between the different types of support, with perceived support in one context contributing to or hindering the perception of support in another. Some authors¹⁹ found that support from friends may have a positive influence on adolescent wellbeing when it is accompanied by family support; whereas among adolescents who reported lower levels of family support, strong support from friends was associated with an increase in mental health symptoms and risk behaviors. Consequently, sources of support are associated with one another and may explain the heterogeneity of the results reported to date regarding the importance of family and friends during adolescence.

The present study has a number of limitations that should be taken into consideration. First, the data were gathered exclusively through self-report measures. Future studies may wish to include objective measures of emotional intelligence or social support. Second, including the type of support (instrumental, emotional or informative) provided by participants' close networks would have offered valuable, specific information that may have shed further light on the associations studied. It would also be interesting to analyze this relationship dynamic by including relevant variables such as parental styles, the role of siblings, etc., and to analyze whether the proposed model is maintained as a function of the socioeconomic status of the family and the characteristics of the school and classroom. Third, when generalizing the results of this study, it should be taken into account that it is not representative of all socioeconomic realities, since it has focused on the middle class population. However, the study can be generalized to the majority of the adolescent student population since the majority of the real population is situated in the medium socioeconomic level, although it is true that this is a characteristic that could not be controlled. Likewise, the sample was chosen incidentally, being more appropriate the use of a random sampling, as a non-probability sampling is a less stringent method and depends largely on the experience of the researchers.⁶⁵ Finally, since the study was cross-sectional in nature, we cannot establish causal relationships between the variables studied beyond the statistical plausibility offered by the use of structural equations in this type of study. Further experimental research is therefore required to analyze and confirm the results reported here.

Indeed, it is imperative to conduct additional longitudinal studies to thoroughly analyze and validate the reported results, as manipulating any of the variables involved would raise ethical concerns. Moreover, although the structural equations analysis revealed trait EI as the variable that mediates the influence of social support on life satisfaction, a recursive relationship may exist between social support and this personal variable. Future research should therefore explore these associations through longitudinal studies.

Conclusion

In general, the results of the present study highlight the importance of contextual and personal factors in promoting adolescent life satisfaction, with family support being of particular importance, along with perceived emotional clarity and repair.^{14,21} It is therefore important to focus on creating positive family environments that enable the perception of higher levels of support by those in the school environment.¹⁹ Support from teachers also contributes significantly, albeit to a lesser extent than the variables mentioned above, to life satisfaction when adolescents feel that their teachers help them regulate their emotions. This highlights the importance of engaging in classroom activities designed to foster emotional competence.⁵⁹

Data Sharing Statement

Data not available due to privacy or ethical restrictions. The data that support the findings of this study are available on request from the corresponding author.

Ethics Approval

The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Committee on Ethics for Research Involving Human Subjects (CEISH) of the University of the Basque Country (M10/2015/076). Informed consent was obtained from the participants and their legal guardians.

Acknowledgments

The authors of this study are members of the Consolidated Research Group IT1719-22 of the Basque University System, as well as of the project EDU2017-83949-P of the State Subprogram of Knowledge Generation of the Ministry of Economy, Industry and Competitiveness of Spain, through which this work has been funded.

Disclosure

The authors report no conflicts of interest in this work.

References

1. Seligman ME, Csikszentmihalyi M. Positive psychology: an introduction. In: Csikszentmihalyi M, editor. *Flow and the Foundations of Positive Psychology*. New York: Springer; 2014:279–298.
2. Kern ML, Williams P, Spong C, et al. Systems informed positive psychology. *J Positive Psychol*. 2020;15(6):705–715. doi:10.1080/17439760.2019.1639799
3. Martela F, Sheldon KM. Clarifying the concept of well-being: psychological need satisfaction as the common core connecting eudaimonic and subjective well-being. *Rev Gen Psychol*. 2019;23(4):458–474. doi:10.1177/1089268019880886
4. Diener E, Heintzelman SJ, Kushlev K, et al. Findings all psychologists should know from the new science on subjective well-being. *Can Psychol*. 2017;58(2):87–104. doi:10.1037/cap0000063
5. Márquez J, Long E. A global decline in adolescents' subjective well-being: a comparative study exploring patterns of change in the life satisfaction of 15-year-old students in 46 countries. *Child Indic Res*. 2021;14(3):1251–1292. doi:10.1007/s12187-020-09788-8
6. Orben A, Lucas RE, Fuhrmann D, Kievit R. Trajectories of adolescent life satisfaction. *Royal Soc Open Sci*. 2022;9(8):211808. doi:10.1098/rsos.211808
7. Diener E, Seligman ME, Choi H, Oishi S. Happiest people revisited. *Perspect Psychol Sci*. 2018;13(2):176–184. doi:10.1177/1745691617697077
8. Blasco-Belled A, Rogoza R, Torrelles-Nadal C, Alsinet C. Emotional intelligence structure and its relationship with life satisfaction and happiness: new findings from the bifactor model. *J Happiness Stud*. 2020;21:2031–2049. doi:10.1007/s10902-019-00167-x
9. Ramos-Díaz E, Rodríguez-Fernández A, Axpe I, Ferrara M. Perceived emotional intelligence and life satisfaction among adolescent students: the mediating role of resilience. *J Happiness Stud*. 2019;20(8):2489–2506. doi:10.1007/s10902-018-0058-0
10. Dambi JM, Corten L, Chiwaridzo M, Jack H, Mlambo T, Jelsma J. A systematic review of the psychometric properties of the cross-cultural translations and adaptations of the Multidimensional Perceived Social Support Scale (MSPSS). *Health Qual Life Outcomes*. 2018;16:1–19. doi:10.1186/s12955-018-0912-0

11. Burešová I, Jelínek M, Dosedlová J, Klimusová H. Predictors of mental health in adolescence: the role of personality, dispositional optimism, and social support. *Sage Open*. 2020;10(2):215824402091796. doi:10.1177/2158244020917963
12. Khataiwada J, Muzemba BA, Wada K, Ikeda S. The effect of perceived social support on psychological distress and life satisfaction among Nepalese migrants in Japan. *PLoS One*. 2021;16(2):e0246271. doi:10.1371/journal.pone.0246271
13. Bi S, Stevens GW, Maes M, et al. Perceived social support from different sources and adolescent life satisfaction across 42 countries/regions: the moderating role of national-level generalized trust. *J Youth Adolesc*. 2021;50:1384–1409. doi:10.1007/s10964-021-01441-z
14. Sitter KG, Huebner ES, Hills KJ. Calling for social support: whose support and what types of support matter for early adolescents' life satisfaction? In: Michalos AC, editor. *The Pope of Happiness*. Switzerland: Springer; 2021:227–241. doi:10.1007/978-3-030-53779-1
15. Bokhorst CL, Sumter SR, Westenberg PM. Social support from parents, friends, classmates, and teachers in children and adolescents aged 9 to 18 years: who is perceived as most supportive? *Soc Dev*. 2010;19(2):417–426. doi:10.1111/j.1467-9507.2009.00540.x
16. Chu PS, Saucier DA, Hafner E. Meta-analysis of the relationships between social support and well-being in children and adolescents. *J Soc Clin Psychol*. 2010;29(6):624–645. doi:10.1521/jscp.2010.29.6.624
17. Bonnie RJ, Stroud C, Breiner H; Committee on Improving the Health, National Research Council. Young adults in the 21st century. In: *Investing in the Health and Well-Being of Young Adults*. National Academies Press (US). 2015.
18. Moore GF, Cox R, Evans RE, et al. School, peer and family relationships and adolescent substance use, subjective wellbeing and mental health symptoms in Wales: a cross sectional study. *Child Indic Res*. 2018;11(6):1951–1965. doi:10.1007/s12187-017-9524-1
19. Salovey P, Stroud LR, Woolery A, Epel ES. Perceived emotional intelligence, stress reactivity, and symptom reports: further explorations using the Trait Meta-Mood Scale. *Psychol Health*. 2002;17:611–627. doi:10.1080/08870440290025812
20. Baudry AS, Grynberg D, Dassonneville C, Leloirain S, Christophe V. Sub-dimensions of trait emotional intelligence and health: a critical and systematic review of the literature. *Scand J Psychol*. 2018;59(2):206–222. doi:10.1111/sjop.12424
21. Prado-Gascó V, Villanueva L, Górriz-Plumed AB. Trait emotional intelligence and subjective well-being in adolescents: the moderating role of feelings. *Psicothema*. 2018;30(3):310–315. doi:10.7334/psicothema2017.232
22. Azpiazu L, Rodríguez-Fernández A, Fernández-Zabala A. Perceived academic performance explained by school climate, psychological positive variables and life satisfaction. *Br J Educ Psychol*. 2022. doi:10.1111/bjep.12557
23. Vergara AI, Alonso-Alberca N, San-Juan C, Aldás J, Vozmediano L. Be water: direct and indirect relations between perceived emotional intelligence and subjective well-being. *Austral J Psychol*. 2015;67(1):47–54. doi:10.1111/ajpy.12065
24. Joseph DL, Newman DA. Emotional intelligence: an integrative meta-analysis and cascading model. *J Appl Psychol*. 2010;95(1):54–78. doi:10.1037/a0017286
25. Azpiazu L, Esnaola I, Sarasa M. Capacidad predictiva del apoyo social en la inteligencia emocional de adolescentes [Predictive capacity of social support on adolescent emotional intelligence]. *Eur J Educ Psychol*. 2015;8(1):23–29. doi:10.1016/j.ejeps.2015.10.003
26. Rey L, Extremera N, Sánchez-álvarez N. Clarifying the links between perceived emotional intelligence and well-being in older people: pathways through perceived social support from family and friends. *Appl Res Qual Fife*. 2019;14(1):221–235. doi:10.1007/s11482-017-9588-6
27. Malinauskas R, Malinauskiene V. The relationship between emotional intelligence and psychological well-being among male university students: the mediating role of perceived social support and perceived stress. *Int J Environ Res Public Health*. 2020;17(5):1605. doi:10.3390/ijerph17051605
28. Azpiazu L, Rodríguez-Fernández A, Goñi E. Adolescent life satisfaction explained by social support, emotion regulation, and resilience. *Front Psychol*. 2021;4085. doi:10.3389/fpsyg.2021.694183
29. Kong F, Gong X, Sajjad S, Yang K, Zhao J. How is emotional intelligence linked to life satisfaction? The mediating role of social support, positive affect and negative affect. *J Happiness Stud*. 2019;20(8):2733–2745. doi:10.1007/s10902-018-00069-4
30. Coll MG, Navarro-Mateu D, Giménez-Espert MDC, Prado-Gascó VJ. Emotional intelligence, empathy, self-esteem, and life satisfaction in Spanish adolescents: regression vs. QCA models. *Front Psychol*. 2020;11. doi:10.3389/fpsyg.2020.01629
31. Franco MDG, Beja MJ, Candeias A, Santos N. Emotion understanding, social competence and school achievement in children from primary school in Portugal. *Front Psychol*. 2017;8:1376. doi:10.3389/fpsyg.2017.01376
32. Salovey P, Bedell BT, Detweiler JB, Mayer JD. Current directions in emotional intelligence research. In: Lewis M, Haviland JM, editors. *Handbook of Emotions*. New York: Guilford; 2000:504–520.
33. Ruvalcaba-Romero NA, Fernández-Berrocal P, Salazar-Estrada JG, Gallegos-Guajardo J. Positive emotions, self-esteem, interpersonal relationships and social support as mediators between emotional intelligence and life satisfaction. *J Behav Health Soc Issues*. 2017;9(1):1–6. doi:10.1016/j.jbhsi.2017.08.001
34. Kalaitzaki A, Tsouvelas G, Koukoulis S. Social capital, social support and perceived stress in college students: the role of resilience and life satisfaction. *Stress Health*. 2021;37(3):454–465. doi:10.1002/smi.3008
35. Malinauskas DR, Malinauskiene V. The mediation effect of perceived social support and perceived stress on the relationship between emotional intelligence and psychological wellbeing in male athletes. *J Hum Kinet*. 2018;65:291–303. doi:10.2478/hukin-2018-0017
36. Calmeiro L, Camacho I, de Matos MG. Life satisfaction in adolescents: the role of individual and social health assets. *Span J Psychol*. 2018;21. doi:10.1017/sjp.2018.24
37. Kil KS. A study on the effect of parent's rearing attitudes, social support on the children's emotional intelligence. *J Korean Child Care Educ*. 2006;2(2):147–164.
38. Southwick SM, Bonanno GA, Masten AS, Panter-Brick C, Yehuda R. Resilience definitions, theory and challenges: interdisciplinary perspectives. *Eur J Psychotraumatol*. 2014;5:1–14. doi:10.3402/ejtp.v5.25338
39. Fernández-Lasarte O, Ramos-Díaz E, Axpe I. Rendimiento académico, apoyo social percibido e inteligencia emocional en la universidad [Academic performance, perceived social support and emotional intelligence at university]. *Eur J Invest Health Psychol Educ*. 2019;9(1):39–49. doi:10.30552/ejihpe.v9i1.315
40. Bronfenbrenner U, Morris PA. The bioecological model of human development. In: Damon W, Lerner RM, editors. *Handbook of Child Psychology: Theoretical Models of Human Development*. New Jersey: Wiley; 2007:793–828. doi:10.1002/9780470147658.chpsy0114
41. Jiménez MN, Axpe EI. El rol del apoyo social percibido en la predicción de la inteligencia emocional entre adolescentes de la República Dominicana [The role of perceived social support in the prediction of emotional intelligence among adolescents in the Dominican Republic]. *Eur J Educ Psychol*. 2020;13(2):97–110. doi:10.30552/ejtp.v13i2.354

42. Lin N. Conceptualizing social support. In: Lin N, Dean A, Ensel W, editors. *Social Support, Life Events and Depression*. London: Academic Press; 1986:17–30.
43. Barragán AB, Molero MDM, Pérez-Fuentes MDC, et al. Interpersonal support, emotional intelligence and family function in adolescence. *Int J Environ Res Public Health*. 2021;18(10):5145. doi:10.3390/ijerph18105145
44. López-Zafra E, Ramos-álvarez MM, El-Ghoudani K, et al. Social support and emotional intelligence as protective resources for well-being in Moroccan adolescents. *Front Psychol*. 2019;10:1529. doi:10.3389/fpsyg.2019.01529
45. Szczesniak M, Tulecka M, Jemielniak M. Family functioning and life satisfaction: the mediatory role of emotional intelligence. *Psychol Res Behav Manag*. 2020;13:223–232. doi:10.2147/PRBM.S240898
46. González-Ramírez MT, Landero R. Propiedades psicométricas de la escala de Apoyo Social Familiar y de Amigos (AFA-R) en una muestra de estudiantes [Psychometric properties of the Social Support From Parents and Friends Scale (AFA-R) in a student sample]. *Acta de Investigación Psicológica*. 2014;4(2):1469–1480. doi:10.1016/s2007-4719(14)70387-4
47. Currie C. *Inequalities in Young People's Health: HBSC International Report from the 2005/2006 Survey (No. 5)*. Edinburgh: World Health Organization; 2008.
48. Moreno C, Ramos P, Rivera F, et al. *Las Conductas Relacionadas Con la Salud y El Desarrollo de Los Adolescentes Españoles. Resultados Del Estudio HBSC-2010 Con Chicos y Chicas Españoles de 11 a 18 Años [Health-Related and Developmental Behaviours of Spanish Adolescents. Results from the HBSC-2010 Study with Spanish Boys and Girls Aged 11–18 Years]*. Spain: Ministerio de Sanidad, Servicios Sociales e Igualdad de España; 2012.
49. Salguero JM, Fernández-Berrocal P, Ruiz-Aranda D, González RC. Propiedades psicométricas de la versión reducida de la Trait Meta-Mood Scale: TMMS-12. In: Fernández-Berrocal P, editor. *Avances en el estudio de la Inteligencia Emocional*. Spain: Fundación Marcelino Botín; 2009:129–134.
50. Salovey P, Mayer JD, Goldman SL, Turvey C, Palfai TP. Emotional attention, clarity, and repair: exploring emotional intelligence using the Trait Meta-Mood Scale. In: Pennebaker JW, editor. *Emotion, Disclosure, and Health*. Washington, US: American Psychological Association; 1995:125–154. doi:10.1037/10182-000
51. Diener E, Emmons RA, Larsen RJ, Griffin S. The satisfaction with life scale. *J Pers Assess*. 1985;49(1):71–75. doi:10.1207/s15327752jpa4901_13
52. Atienza F, Pons D, Balaguer I, García-Merita M. Propiedades psicométricas de la Escala de Satisfacción con la Vida en adolescentes [Psychometric properties of the Satisfaction with Life Satisfaction Scale in adolescents]. *Psicothema*. 2000;12(2):314–319.
53. Holmbeck GN. Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: examples from the child-clinical and pediatric psychology literatures. *J Consult Clin Psychol*. 1997;65(4):599–610. doi:10.1037//0022-006x.65.4.599
54. Holmbeck GN. Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *J Pediatr Psychol*. 2002;27:87–96. doi:10.1093/jpepsy/27.1.87
55. McDonald RP, Ho MHR. Principles and practice in reporting structural equation analyses. *Psychol Methods*. 2002;7(1):64–82. doi:10.1037/1082-989X.7.1.64
56. West SG, Taylor AB, Wu W. Model fit and model selection in structural equation modeling. In: Hoyle RH, editor. *Handbook of Structural Equation Modeling*. New York, US: Guilford; 2014:209–231.
57. Bryant FB, Satorra A. Principles and practice of scaled difference chi-square testing. *Struct Equation Model*. 2012;19:372–398. doi:10.1080/10705511.2012.687671
58. Wierenga LM, Bos MG, Schreuders E, et al. Unraveling age, puberty and testosterone effects on subcortical brain development across adolescence. *Psychoneuroendocrinology*. 2018;91:105–114. doi:10.1016/j.psyneuen.2018.02.034
59. Howell AJ, Keyes CL, Passmore HA. Flourishing among children and adolescents: structure and correlates of positive mental health, and interventions for its enhancement. In: Proctor C, Linley PA, editors. *Research, Applications, and Interventions for Children and Adolescents*. New York, US: Springer; 2013:59–79.
60. Morelen D, Shaffer A, Suveg C. Maternal emotion regulation: links to emotion parenting and child emotion regulation. *J Fam Issues*. 2016;37(13):1891–1916. doi:10.1177/0192513X14546720
61. Morris AS, Silk JS, Steinberg L, Myers SS, Robinson LR. The role of the family context in the development of emotion regulation. *Soc Dev*. 2007;16(2):361–388. doi:10.1111/j.1467-9507.2007.00389.x
62. Pena M, Losada L. Test anxiety in Spanish adolescents: examining the role of emotional attention, and ruminative self-focus and regulation. *Front Psychol*. 2017;8:1423. doi:10.3389/fpsyg.2017.01423
63. Jennings PA, Greenberg MT. The prosocial classroom: teacher social and emotional competence in relation to student and classroom outcomes. *Rev Educ Res*. 2009;79(1):491–525. doi:10.3102/0034654308325693
64. Henneberger AK, Mushonga DR, Preston AM. Peer influence and adolescent substance use: a systematic review of dynamic social network research. *Adolesc Res Rev*. 2021;6(1):57–73. doi:10.1007/s40894-019-00130-0
65. Oribhabor CB, Anyanwu CA. Research sampling and sample size determination: a practical application. *J Educ Res*. 2019;2(1):47–57.

Psychology Research and Behavior Management

Dovepress

Publish your work in this journal

Psychology Research and Behavior Management is an international, peer-reviewed, open access journal focusing on the science of psychology and its application in behavior management to develop improved outcomes in the clinical, educational, sports and business arenas. Specific topics covered in the journal include: Neuroscience, memory and decision making; Behavior modification and management; Clinical applications; Business and sports performance management; Social and developmental studies; Animal studies. The manuscript management system is completely online and includes a very quick and fair peer-review system, which is all easy to use. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/psychology-research-and-behavior-management-journal>