

Parental Educational Practices and Life Satisfaction: The Role of Positive Affect and Agreeableness in Adolescents

Isabel Mercader-Rubio, Nieves-Fátima Oropesa-Ruiz , Nieves Gutiérrez Ángel , José Juan Carrión-Martínez

Department of Psychology, University of Almería, Almería, Spain

Correspondence: Nieves-Fátima Oropesa-Ruiz; Nieves Gutiérrez Ángel, Email foropesa@ual.es; nga212@ual.es

Introduction: Researchers have investigated the external elements that can condition a person's satisfaction with life, although it has been proven that they do not explain a large part of the phenomenon. For this reason, other variables such as perceived competence, personality styles and personal autonomy are being investigated more successfully. The main objective of this paper is to study the influence of parental educational practices on adolescent life satisfaction considering the role played by adolescent's positive affect and the agreeableness personality trait by implementing a statistical Mediation Model that explains such relationship.

Methods: The population sample is a total of 742 Spanish adolescents, of which 45.1% were boys and 51.5% were girls. The age ranged between 13 and 19 years (15.63, SD = 1.24).

Results: The results revealed that the relationship between parental educational practices and life satisfaction in adolescence was mediated by positive affect and the personality trait of agreeableness. Both variables did act as serial mediators in this relationship. On the other hand, the serial multiple mediation structural model explained 31.72% of the variability in life satisfaction for the dimension of affection and communication and promotion of autonomy, 29.70% for the psychological control dimension, 26.58% for self-disclosure and 28.21% for the humor dimension of parental educational practices.

Conclusion: These findings have important implications to understand the relationship between parental educational practices and the adolescent life satisfaction, indicating that different parental educational practices will have a positive or negative effect on adolescent positive affect, which will lead to increased or decreased agreeableness influencing the adolescent life satisfaction.

Keywords: adolescence, parenting practices, personality, subjective well-being

Introduction

Family Context and Adolescent Well-Being

The family context is an essential area for the development and well-being of adolescents that is conceptualized as the space that any human being requires to learn, grow, and develop.^{1,2} The family is the first reference group that people have and where the first knowledge and interactions with society are developed and it is in it that the roles to follow in future social relationships are established.³⁻⁵ It can be considered that the family is the union of people who develop feelings of belonging through their relationships and bonds of reciprocity and independence among the members.^{6,7} The family is a key context for working on emotions, and spaces for communication must be created within it.⁸

In addition, according to Oliva and Villa,⁹ the family interpersonal commitments are built among its members and a life project is shared. In this sense, the family has the task of developing in children the skills that allow them to face the various social environments that are presented to them.¹⁰ As a social group, it transmits beliefs, values, norms, as well as ways of dealing with the problems of daily life, hence the type of relationships that unfold between family members become an indicator of how those relationships will be projected with other members of the society.¹¹

Parental educational practices, which are established among its members, from an early age, influence the different stages of life. When this relationship is conflictive, it hinders the psychosocial and emotional development of the subject.

When it is positive, it allows emotional maturity and better development in the areas of their lives, both social, school and work.¹²⁻¹⁴ Adolescents who develop in a positive climate feel integrated and adapted in society.¹⁵ Therefore, it will be the parents who must promote peace and tolerance in their children, establish laws in the family and the roles inside.¹⁶

Parental educational styles are behavioral schemes that simplify parenting and parental education guidelines in certain dimensions that give rise to diverse and varied types of education.¹⁷⁻²⁰ In the scientific literature reviewed on parental educational styles, when it is based on affection and secure attachment, it promotes the development of social skills and with-it positive relationships with peers and, in turn, decreases the probability of behavioral problems.²¹ However, the absence or excessive supervision and protection of children by their parents has been linked to the emergence of inappropriate behaviors at different stages of development.^{18,22}

The dimension of affection, according to Altschul²³ regarding parental educational styles, refers to support and affection in the relationship, as well as the acceptance of the feelings and behaviors of the children and the responsiveness of the parents and how are they involved in their activities. This dimension is cataloged in some research as acceptance, warmth, attention, care or support. Some studies also investigate the opposite pole of this dimension: rejection, criticism, hostility, or negativity.²⁴⁻²⁷

Oliva et al¹⁹ differentiates between six dimensions in the configuration of different parenting styles: behavioral control (understood as the use of negotiation and discipline in setting limits), promotion of autonomy (as demands of maturity), affection and communication (relationship based on sensitivity, respect and active listening), self-disclosure (spontaneous communication), humor (or optimism about life) and psychological control (relationship based on blaming and ridicule). The dimensions of affection and communication and self-disclosure have been found to be positively related to life satisfaction, unlike psychological control, which has been negatively related to life satisfaction.²⁸ On the other hand, in the work of Pérez-Fuentes et al²⁹ the perception by adolescents of high levels of affection and communication, self-disclosure and sense of humor in family dynamics, as well as low levels of psychological control, explained 23.1% of the variability of their life satisfaction. Likewise, studies that analyze the relationship between parental educational styles and life satisfaction show that when parents use democratic and permissive educational styles, life satisfaction of adolescents improves.^{30,31}

Relevant Variables in Life Satisfaction: The Role of Agreeableness and Positive Affect

Regarding life satisfaction, the work of researchers in positive psychology is highly relevant.³²⁻³⁶ The concept of life satisfaction is interpreted as the comprehensive evaluation that people make of their quality of life with family and friends.^{37,38} It has a cognitive component that refers to subjective well-being,³⁹⁻⁴² and it is interpreted as the degree that a person evaluates the comprehensive quality of his life in a positive way.⁴³ Related to the above, young people with higher life satisfaction also experience more positive emotions.⁴⁴

In general terms, different papers have investigated the study of the elements that can condition satisfaction with life. In this sense, some researchers have focused on factors external to the person, such as the economy, although it has been proven that they do not explain a large part of the phenomenon.^{45,46} For some time, other variables such as perceived competence, personality styles and personal autonomy have been investigated.⁴⁷⁻⁴⁹ According to Noriega et al,⁵⁰ in line with this, the basis of life satisfaction is in the perception that the person has of himself and the environment in which he lives, so these self-perceptions and personality traits will be crucial to determine it. For all these reasons, personality is a fundamental variable in this research. To measure the personality, the theoretical model of personality, also known as the Big Five Inventory (BFI), was used, a scale developed by John et al.⁵¹ It consists of eight elements with a Likert-type response format. When translated into Spanish, the Spanish version published by Benet-Martínez and John⁵² gains importance, since it has been applied without modifications, both in Perú⁵³ and in México.⁵⁴

In this context, one of the most relevant factors for this study, as mentioned above, is the agreeableness dimension, since it is considered fundamental in the study of prosocial attitudes towards others, which includes traits such as altruism, tenderness, trust and modesty. Agreeableness has an important relationship with well-being and discomfort perceived by people.⁵⁵ Similarly, the agreeableness dimension alludes to pleasantness and friendliness,⁵⁶ so this scale is made up of two subdimensions: Cooperation/empathy, to measure the ability of the subject of listening to the needs and

problems of others, as well as establishing cooperation with them, and Cordiality/kindness, to measure aspects related to affability, trust and openness towards others.⁵⁷

Different authors have analyzed the role of personality in predicting prosocial behavior, considering it as a synonym of socialization.⁵⁸ Thus, authors such as Caprara et al⁵⁹ have provided studies where agreeableness has been found to be the greatest determinant of prosocial behavior, a relationship that was also found in the study by Graziano et al.⁶⁰ Iacovella et al⁶¹ subsequently confirmed what was found by Caprara et al⁵⁹ mentioned above, in the sense that agreeableness can be a predictor of prosocial behavior. Likewise, agreeableness has been positively related to positive affect^{62,63} and life satisfaction.⁶⁴

As it is noticeable in the aforementioned background, studies that analyze the interrelation between parental educational practices, life satisfaction, positive affect and the personality trait of agreeableness together are practically non-existent. Based on the above, the main objective of this paper is to study the influence of parental educational practices on adolescent life satisfaction with regard to the role played in this relationship by both positive affect and agreeableness from the formulation of a predictive model of multiple mediation. With this, it is intended to expand the studies on structural models in the analysis of adolescent subjective well-being, particularly, with respect to life satisfaction.

In this way, following the previous theoretical reflections, the main research objectives are formulated below: (1) To analyze the relationships established between parental educational practices, life satisfaction, positive affect and the personality trait of agreeableness in a sample of adolescents; (2) To explore the mediating effect of positive affect and agreeableness in the relationship between parental educational practices and life satisfaction in adolescence. Our mediational hypothesis is that the different parental educational practices will cause a positive or negative effect on positive affect, which will lead to an increase or decrease in agreeableness, which will encourage, in turn, the adolescent to experience greater or lesser satisfaction with the life (Figure 1).

Method

Participants

The total number of participants amounted to 742, being a very similar sample in both sexes, 46.7% boys and 53.3% girls, whose ages were between 13 and 19 years old ($M = 15.63$, $SD = 1.244$), and residents in the province of Almeria, Spain. Regarding the level of schooling, 68.6% of the total was enrolled in middle school and 31.4% in high school.

Instruments

Parental Style Scale⁶⁵ is adapted from the original questionnaire by Oliva et al.¹⁹ The scale is made up of 24 items to which adolescents must answer on a scale of 1 to 4, being (1) “totally false” and (4) “totally true”. It assesses the adolescent’s perception of the educational style used by parents grouped into six dimensions: affection and

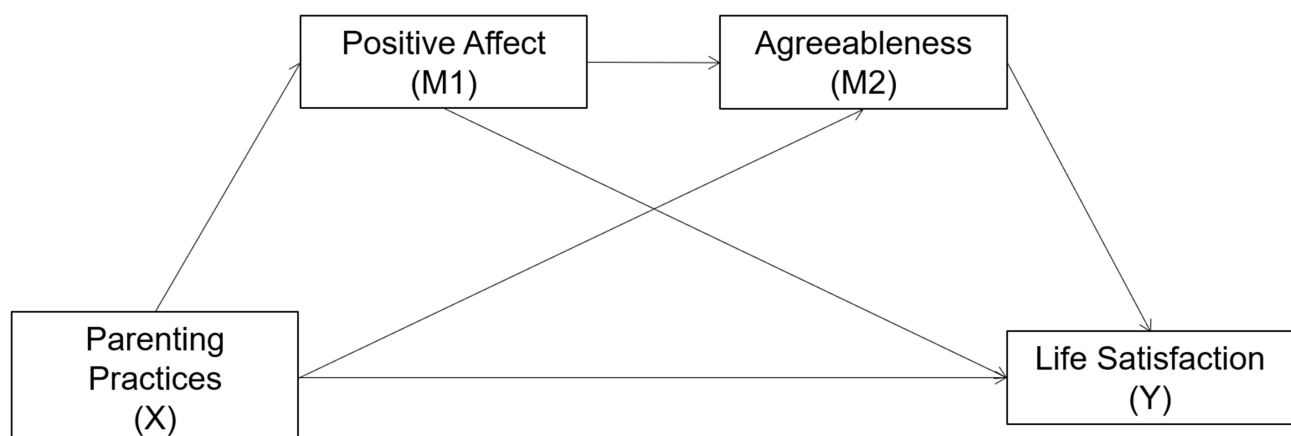


Figure 1 Hypothesized model of multiple serial mediation.

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

communication ($\alpha = 0.84$) (ie: “When I talk to my parents, they show interest and attention”, “My parents encourage me to tell them about my problems and concerns”), promotion of autonomy ($\alpha = 0.81$) (ie: “My parents think that even though I am not yet an adult, I can have good ideas”, “My parents encourage me to make my own decisions”), behavioral control ($\alpha = 0.68$) (ie: “My parents try to know where I am going when I go out”, “If I come home late, my parents ask me why and who I was with”), psychological control ($\alpha = 0.71$) (ie: “My parents make me feel guilty when I don’t do what they want”, “My parents tell me that they are right and I shouldn’t contradict them”), self-disclosure ($\alpha = 0.80$) (ie: “I tell my parents what I do in my free time”, “I talk to my parents about the problems I have with my friends”) and humor ($\alpha = 0.81$) (ie: “My parents are almost always happy and optimistic people”, “My parents often joke with me”). The internal reliability indices of the original scale range between 0.80 and 0.92.⁶⁵ It is used as an instrument with adequate psychometric properties in the evaluation of family dynamics⁸ (Oropesa, 2022).

Life Satisfaction Questionnaire (SWLS).⁶⁶ It offers a global score on the cognitive judgments that the person has about satisfaction with their own life (it is not a measure of positive or negative affect). It is made up of 5 statements of the type: “In most ways my life is close to my ideal”, “The conditions of my life are excellent”, “I am satisfied with my life”, “So far I have gotten the important things I want in life”, “If I could live my life over”, “I would change almost nothing”, to which adolescents must respond on a scale of 1 to 7 that ranges from “strongly disagree” to “strongly agree”. In this work, an internal consistency of $\alpha = 0.84$ is reached. Cronbach’s alpha value for the original scale was 0.87.⁶⁶ Other studies also obtain optimal internal consistency and reliability indices for the adolescent population.^{67,68}

Positive Affect Schedule. In this study, the positive affect scale of the Spanish adaptation PANASN for children and adolescents was used, which is a version of the Positive and Negative Affect Schedule (PANAS) of Watson et al.⁶⁹ This test was elaborated by Sandín in 1997.⁷⁰ The PANASN is a questionnaire 20-item self-report. In this work, we have analyzed the data of the positive affect scale, made up of 10 items (ie, “I am interested in people or things, I am a lively person, I usually get emotional, I feel that I have vitality or energy”), expressed on a Likert-type scale from 1 to 3, where 1 = never, 2 = sometimes, and 3 = many times. The alpha index has been adequate ($\alpha = 0.758$). In the original test, $\alpha = 0.73$ alpha for boys and $\alpha = 0.72$ for girls was obtained.⁷⁰

Agreeableness. The Big Five Inventory Agreeableness scale (BFI)^{51,71} was used. Its scale is made up of 9 items, which are answered in a scale 5-point Likert type, where 1 = totally in disagree and 5 = totally agree. Agreeableness refers to attitudes prosocial towards the rest such as altruism, tenderness, trust, and modesty (ie, “Is helpful and unselfish with others”; “Has a forgiving nature”; “Is generally trusting”). In the study, the reliability of the scale was acceptable ($\alpha = 0.606$). Regarding the reliability of the original scale, an optimal Cronbach’s alpha coefficient was obtained, whose value was 0.79.⁷¹ The scale sample adequate properties psychometric tests with samples of young people and adults.^{52,72}

Procedure

For data collection, the directors of different Secondary Education centers were contacted. We informed them about the objectives, methods, use of the data and the dates and times for the administration of the questionnaires that were agreed. The confidentiality and anonymity of the information provided by the students was maintained. Following the ethical standards of the Declaration of Helsinki, informed consent was obtained from parents/guardians and participants. The study was approved by the Bioethics Committee of the University of Almería (Ref: UALBIO2022/031).

Statistic Analysis

The data were analyzed using version 27 of the statistical package for the Social Sciences (SPSS) and through version 4.1 of the PROCESS macro.^{73,74} Bivariate descriptive and correlational analysis were performed between the study variables using Pearson’s r Correlation coefficient. Pearson’s correlation coefficient was interpreted as follows: $r = 0.10$ and $r = 0.23$ small effect size, $r = 0.24$ and $r = 0.36$ medium effect size, $r = 0.37$ or more large effect size.⁷⁵ Subsequently, the multiple mediation model was calculated for the relationship between parental educational practices and life satisfaction, introducing positive affect and agreeableness as mediating variables, using PROCESS model 6.⁷⁶ Confidence intervals have been calculated based on 10,000 samples.

Results

Descriptive and Correlational Analysis

Table 1 shows the means, standard deviations and Pearson correlations for the variables studied. Pearson's correlation analyzes showed that life satisfaction correlated positively with affect and communication ($r = 0.445, p < 0.01$), autonomy promotion ($r = 0.388, p < 0.01$), self-disclosure ($r = 0.393, p < 0.01$) and humor ($r = 0.399, p < 0.01$), in all cases the effect size was large, and it correlated negatively with psychological control ($r = -0.238, p < 0.01$). On the other hand, positive affect established significant correlations, with a positive sign, with affect and communication ($r = 0.289, p < 0.01$), promotion of autonomy ($r = 0.289, p < 0.01$), self-disclosure ($r = 0.251, p < 0.01$) and mood ($r = 0.361, p < 0.01$), life satisfaction ($r = 0.396, p < 0.01$). The magnitude of the effect was large and correlated significantly and negatively with psychological control ($r = -0.146, p < 0.01$). Regarding the personality trait of agreeableness, agreeableness correlated positively with affect and communication ($r = 0.195, p < 0.01$), promotion of autonomy ($r = 0.176, p < 0.01$), behavioral control ($r = 0.093, p < 0.05$), self-disclosure ($r = 0.208, p < 0.01$) and humor ($r = 0.224, p < 0.01$), life satisfaction ($r = 0.282, p < 0.01$) and positive affect ($r = 0.300, p < 0.01$) and negatively with psychological control ($r = -0.174, p < 0.01$).

Multiple Mediation Analysis

Based on the correlational analysis and considering the assumptions of the mediation analysis, a multiple mediation analysis is calculated for the relationship between parental educational practices and life satisfaction, taking positive affect and agreeableness as mediating variables. Both variables were introduced in the model in the mentioned order. For this purpose, model 6 of the PROCESS macro is operated statistically.^{73–75} In the description of the model, parental educational practices were computed as an independent variable (X), life satisfaction as a dependent variable (Y), positive affect as a mediating variable one (M1) and the personality trait of agreeableness as a mediating variable two (M2).

In the first regression analysis, parental educational practices (X) were considered as the independent variable, and the mediating variable one, referring to positive affect (M1), was considered as the dependent variable. This analysis revealed a statistically significant effect of the parental educational practices variable in its different affect and communication dimensions ($\beta = 0.37, SE = 0.05, p < 0.001$), autonomy promotion ($\beta = 0.39, SE = 0.05, p < 0.001$), psychological control ($\beta = -0.20, SE = 0.05, p < 0.001$), self-disclosure ($\beta = 0.26, SE = 0.05, p < 0.001$), and humor ($\beta = 0.50, SE = 0.06, p < 0.001$) on positive affect. The results were not significant for the dimension of behavioral control of parental educational practices ($p > 0.05$).

In the second regression analysis, the mediating variable one, referring to positive affect (M1) and the independent variable parental educational practices (X), were assumed as independent variables, and the mediating variable two,

Table 1 Bivariate Correlations Between Parental Educational Practices, Life Satisfaction, Positive Affect and Agreeableness

	1	2	3	4	5	6	7	8	9
1. Affection-communication	–								
2. Promotion of autonomy	0.676**	–							
Emotional									
3. Behavior control	0.147**	0.022	–						
4. Psychological control	0.317**	-0.426**	0.296**	–					
5. Self-disclosure	0.556**	0.461**	0.202**	-0.179**	–				
6. Humor	0.651**	0.379**	0.145**	-0.283**	0.515**	–			
7. Life satisfaction	0.445**	0.388**	0.075	-0.238**	0.393**	0.399**	–		
8. Affection positive	0.289**	0.289**	0.016	-0.146**	0.251**	0.361**	0.396**	–	
9. Agreeableness	0.195**	0.176**	0.093*	-0.174**	0.208**	0.224**	0.282**	0.300**	–
M	13.06	12.97	12.84	9.20	10.49	12.68	24.17	23.56	3.63
SD	2.82	2.76	2.62	2.92	3.33	2.69	6.79	3.65	0.56

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

referring to the personality trait of agreeableness, was assumed as the dependent variable (M2). This analysis revealed a statistically significant effect of positive affect ($\beta = 0.04, SE = 0.007, p < 0.001$) and parental educational practices such as affection and communication ($\beta = 0.02, SE = 0.009, p < 0.001$) and autonomy promotion ($\beta = 0.02, SE = 0.009, p < 0.001$), psychological control ($\beta = -0.01, SE = 0.008, p < 0.05$), self-disclosure ($\beta = 0.01, SE = 0.008, p < 0.001$) and humor ($\beta = 0.03, SE = 0.01, p < 0.01$) on agreeableness. The results were not significant for the dimension of behavioral control of parental educational practices ($p > 0.05$).

In the third regression analysis, the mediating variables one and two were considered as independent variables, referring to positive affect (M1) and the personality trait of agreeableness (M2), as well as the independent variable, referring to parental educational practices (X), and life satisfaction (Y) as the dependent variable. Significant effects of positive affect ($\beta = 0.46, SE = 0.07, p < 0.001$), agreeableness ($\beta = 1.31, SE = 0.49, p < 0.01$), and affect and communication ($\beta = 0.95, SE = 0.10, p < 0.001$) on life satisfaction. Significant effects of positive affect ($\beta = 0.49, SE = 0.08, p < 0.001$), agreeableness ($\beta = 1.44, SE = 0.51, p < 0.01$) and autonomy promotion ($\beta = 0.78, SE = 0.10, p < 0.001$) on life satisfaction. Significant effects of positive affect ($\beta = 0.57, SE = 0.08, p < 0.001$), agreeableness ($\beta = 1.81, SE = 0.53, p < 0.001$), and psychological control ($\beta = -0.41, SE = 0.09, p < 0.001$) on life satisfaction were found. Significant effects of positive affect ($\beta = 0.53, SE = 0.08, p < 0.001$), agreeableness ($\beta = 1.52, SE = 0.52, p < 0.01$), and self-disclosure ($\beta = 0.63, SE = 0.08, p < 0.001$) on life satisfaction were found. Significant effects found of positive affect ($\beta = 0.41, SE = 0.08, p < 0.001$), agreeableness ($\beta = 1.43, SE = 0.51, p < 0.01$), and humor ($\beta = 0.90, SE = 0.11, p < 0.001$) on life satisfaction. The results were not significant for the dimension of behavioral control of parental educational practices ($p > 0.05$).

In the last regression analysis, the independent variable was computed, referring to the dimensions of parental educational practices (X) and the independent variable life satisfaction (Y). The results showed that the total effect of parental educational practices such as affection and communication ($\beta = 1.18, SE = 0.10, p < 0.001$), autonomy promotion ($\beta = 1.03, SE = 0.10, p < 0.001$), psychological control ($\beta = -0.58, SE = 0.10, p < 0.001$), self-disclosure ($\beta = 0.81, SE = 0.09, p < 0.001$), and humor ($\beta = 1.19, SE = 0.10, p < 0.001$) on life satisfaction was significant. The results were not significant for the dimension of behavioral control of parental educational practices ($p > 0.05$).

On the other hand, the serial multiple mediation structural model explained 31.72% of the variability in life satisfaction for the dimension of affection and communication ($R^2 = 0.3172$) and promotion of autonomy ($R^2 = 0.3172$) (Figures 2 and 3), 29.70% for the psychological control dimension ($R^2 = 0.2970$) (Figure 4), 26.58% for self-disclosure ($R^2 = 0.2658$) (Figure 5) and 28.21% for the humor dimension ($R^2 = 0.2821$) of parental educational practices (Figure 6).

Next, the indirect effects were calculated by applying the bootstrapping technique and the contrast results for the serial multiple mediation model (Table 2). The analysis of the conditional effects revealed that the effect of parental

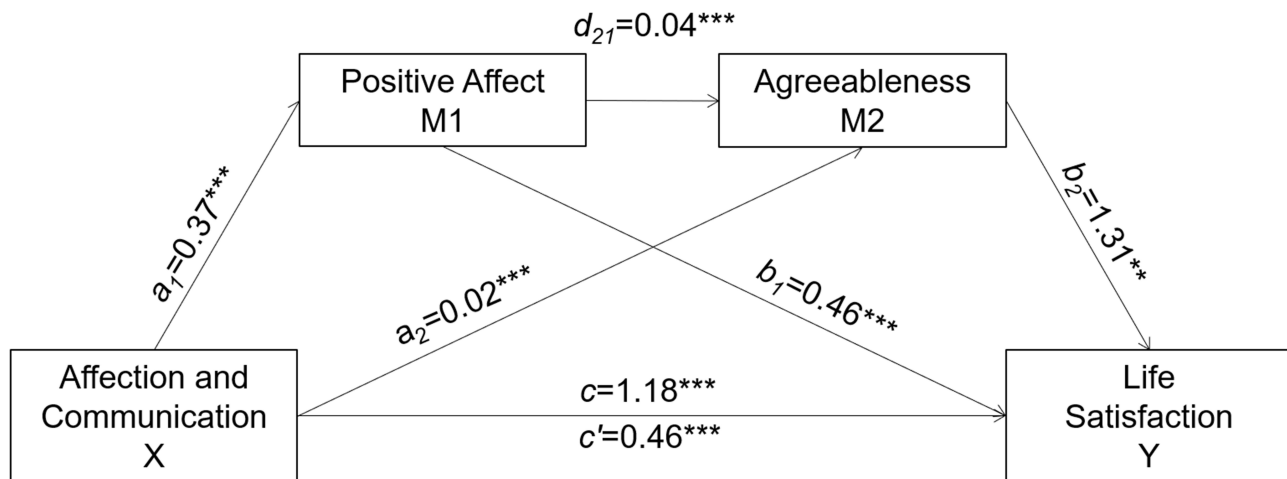


Figure 2 Model of multiple serial mediation for affection and communication. Note: ** $p < 0.01$, *** $p < 0.001$.

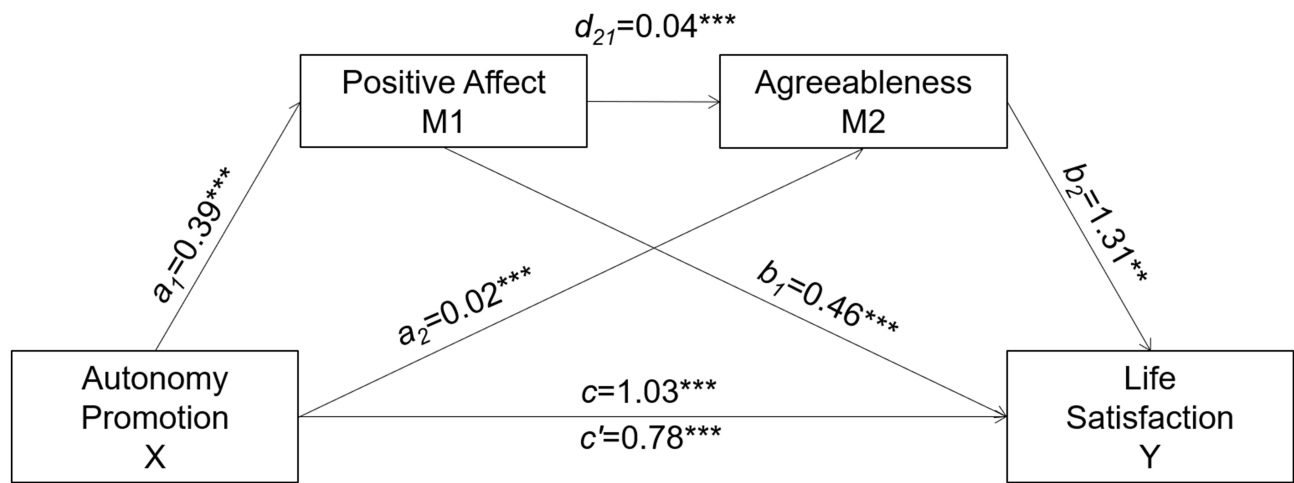


Figure 3 Model of multiple serial mediation for autonomy promotion.
Note: $**p < 0.01$, $***p < 0.001$.

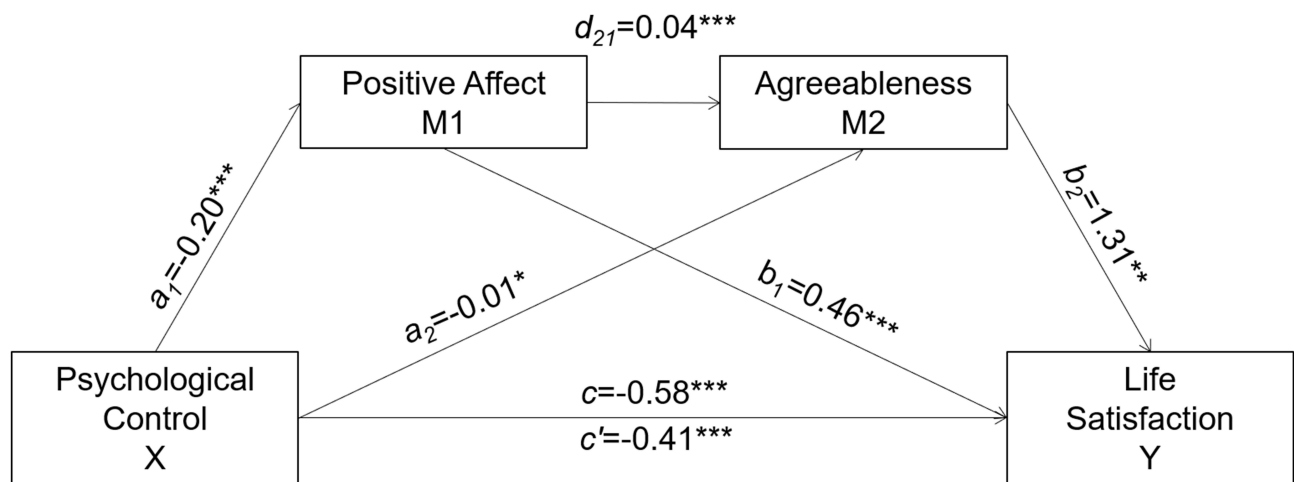


Figure 4 Model of multiple serial mediation for psychological control.
Note: $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

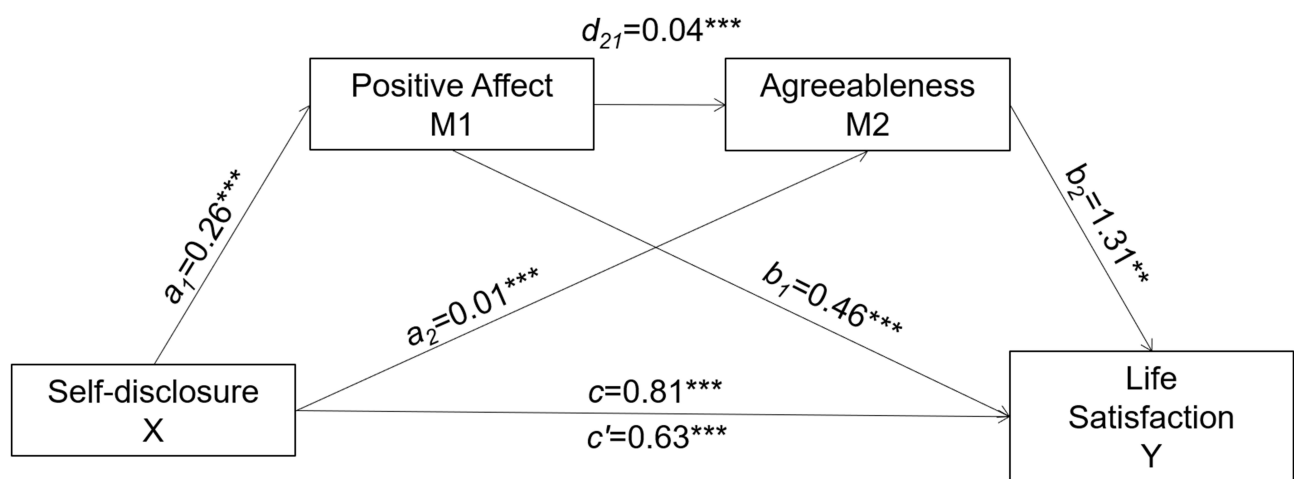


Figure 5 Model of multiple serial mediation for self-disclosure.
Note: $**p < 0.01$, $***p < 0.001$.

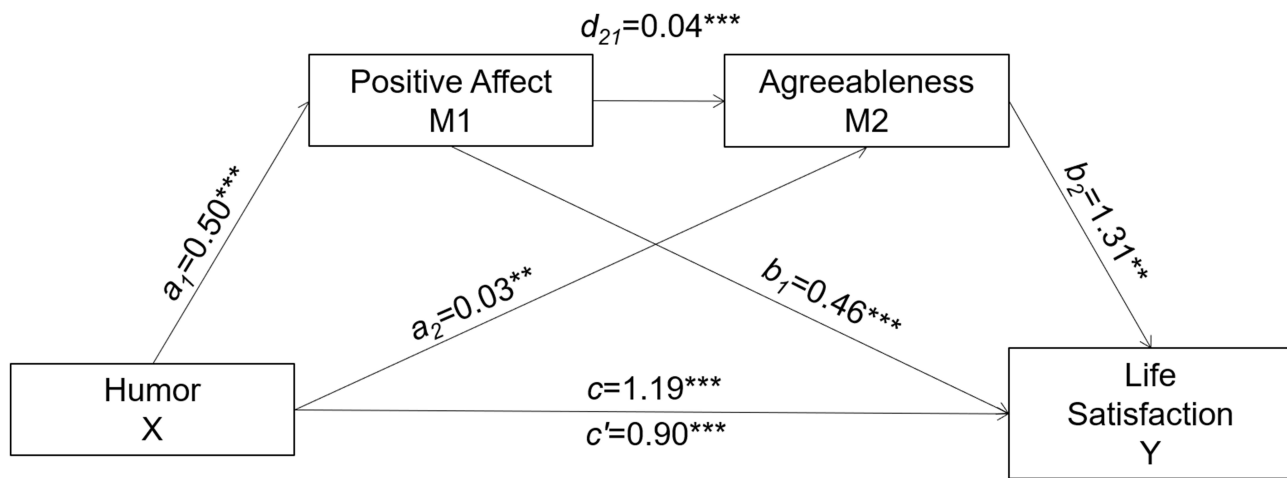


Figure 6 Model of multiple serial mediation for humor.
Note: ** $p < 0.01$, *** $p < 0.001$.

educational practices (affection and communication, promotion of autonomy, psychological control, self-disclosure and humor) on life satisfaction, through positive affect, as well as the effect of previous parental educational practices on satisfaction, through positive affect and agreeableness, were greater than the effect of said parental educational practices on life satisfaction, through agreeableness.

Table 2 Indirect Effects of Parental Educational Practices on Life Satisfaction

	Total	Effect	Boot SE	IC 95%
Affection and communication				
Ind1		0.17	0.05	[0.09, 0.28]
Ind2		0.03	0.02	[0.003, 0.08]
Ind3		0.01	0.009	[0.003, 0.04]
C1		0.13	0.06	[0.03, 0.26]
C2		0.15	0.05	[0.07, 0.26]
C3		0.01	0.02	[-0.01, 0.06]
Autonomy promotion				
Ind1		0.19	0.05	[0.10, 0.31]
Ind2		0.04	0.02	[0.003, 0.09]
Ind3		0.02	0.01	[0.004, 0.04]
C1		0.15	0.06	[0.04, 0.29]
C2		0.17	0.05	[0.08, 0.29]
C3		0.01	0.02	[-0.01, 0.06]
Psychological control				
Ind1		-0.11	0.03	[-0.19, -0.05]
Ind2		-0.03	0.02	[-0.08, -0.002]
Ind3		-0.01	0.007	[-0.03, -0.004]
C1		-0.08	0.04	[-0.17, -0.0008]
C2		-0.10	0.03	[-0.17, -0.04]
C3		-0.01	0.01	[-0.06, 0.01]

(Continued)

Table 2 (Continued).

	Total	Effect	Boot SE	IC 95%
Self-disclosure				
	Ind1	0.14	0.04	[0.06, 0.24]
	Ind2	0.02	0.01	[0.001, 0.07]
	Ind3	0.01	0.008	[0.003, 0.03]
	C1	0.11	0.05	[0.01, 0.23]
	C2	0.12	0.04	[0.05, 0.22]
	C3	0.01	0.01	[-0.02, 0.05]
Humor				
	Ind1	0.21	0.06	[0.11, 0.34]
	Ind2	0.04	0.02	[0.003, 0.10]
	Ind3	0.02	0.01	[0.006, 0.05]
	C1	0.16	0.07	[0.04, 0.32]
	C2	0.18	0.06	[0.08, 0.32]
	C3	0.01	0.02	[-0.02, 0.06]

Discussion

In this large-scale study, the objective of explaining the influence exerted by parental educational practices based on the role played by positive affect and agreeableness has been fulfilled. In this way, the studies that seek to explain the psychological mechanisms that mediate life satisfaction during adolescence are expanded, advancing in bottom-up research, thus facilitating a more complete and interactive understanding in the study of the characteristics of the family context and its relationship with the subjective well-being of the adolescent.

Regarding our first major objective, and regarding the direct relationships between parental educational practices and life satisfaction, our results showed that the main and most robust relationships are established between the dimensions of affection and communication, promotion of autonomy, self-disclosure and humor and life satisfaction, with clear empirical evidence that supports the previous results, especially regarding the perception by adolescents of high affection and communication in the educational practices of their parents and its relationship with high life satisfaction.^{28,30,31} These data highlight the need for parents to provide moments and spaces for communication with their children, in favor of coping with affective and emotional aspects in the parent-adolescent relationship.⁸

In addition, the results of the study by Reina et al²⁸ also coincides with the results found in this research regarding the existence of a close correlation between self-disclosure or spontaneous communication by children towards their parents and the cognitive evaluation that people make of their quality of life. On the other hand, regarding the relationship between promotion of autonomy and humor with life satisfaction, our data are also convincing in this sense and reflect a strong relationship between these variables.

Regarding the relationship between parental educational practices and positive affect, in our study, positive affect correlated positively with the humor dimension, with a large effect size. Therefore, the sense of humor or optimism in the parents is relevant for the adolescent to feel happy and develop positively on an affective level. Different authors agree that the characteristics of the relationships established between members of the family group are transferred to other relational contexts, with the family being relevant in affective development.^{3-5,11} In this sense, our data rescue the value of humor or optimism in family dynamics. Similarly, the works of Oliva et al¹⁹ have been insisting on the importance of this dimension in parental educational practices for a better emotional and behavioral adjustment of the adolescent, and Sanmartín et al⁴⁹ highlights the role played by the emotional climate in improving life satisfaction.

On the other hand, positive affect and life satisfaction (two variables that make up subjective well-being and that are studied independently) were found to be strongly related, in line with what was obtained by other authors.⁴⁴ In this same direction, in the study by Cassà et al,⁴⁷ emotional competence was found to be predictively related to life satisfaction. On

the other hand, regarding the relationship between the personality trait of agreeableness and positive affect, both variables have been found to be closely related, as shown in previous studies.^{62,63}

Second, considering the previous findings of the relational analysis between the variables under study (parental educational practices, life satisfaction, positive affect and agreeableness) and with the aim of advancing in this field of research, a multiple serial mediation model has been empirically tested to analyze the underlying psychological mechanisms that structurally explain the above relationships, thus fulfilling our second major research objective.

In this sense, the results showed that the causal effect of parental educational practices, specifically the dimensions of affection and communication, promotion of autonomy, psychological control, self-disclosure and humor, on the life satisfaction of adolescents, through positive affect, as well as the effect of previous parental educational practices on life satisfaction, through positive affect and agreeableness, were greater than the effect that these parental educational practices exerted on life satisfaction through agreeableness. Limonero et al⁴⁸ found, in line with our results, a mediating effect of emotional regulation on the relationship found between resilience and life satisfaction in a sample of university students.

However, the results were not significant for the dimension of behavioral control of parental educational practices, which implies that this parental practice did not conditionate, in any sense, the adolescent's life satisfaction in the present serial multiple mediation model. In this direction, other researchers found that behavioral control established low or non-significant correlations with variables of psychological adjustment, or it was even positively related to internal or emotional problems in adolescents,¹⁹ so that perhaps these findings may partly explain the results we have obtained in this regard. Therefore, it is suggested to continue investigating the role that behavioral control can play in satisfaction with life from other mediation models, as well as considering differences due to sex in the analysis of the present predictive model.

Lastly, this research although it was made up of a large sample of adolescents, it is not exempt from limitations; therefore, we must be cautious when generalizing the results, since they come from a cross-sectional study. On the other hand, self-report measures were used that, although they are widely used by researchers at this stage of development, can be completed with other data collection techniques (observation, interview, among others), applicable to both adolescents and to their parents.

Conclusions

One of the first conclusions drawn from this study is that when family dynamics are characterized by high doses of affection and communication, promotion of children's autonomy, predominance of humor among its members and a parent-child relationship based on self-disclosure, adolescents feel more satisfied with their lives, experiencing an improvement in their well-being. However, in the case of psychological control, as it increases, adolescents perceive less satisfaction with their lives. In addition, in particular, the use of humor as a parental educational practice is positively related to happiness, so that our data point towards promoting its use in the family context. Therefore, considering these results, the design of family intervention programs is proposed where tools are provided to improve parental educational practices, mainly in the mentioned sense, since these practices will increase the quality of life and the subjective well-being of children teenage sons and daughters.

On the other hand, the relationship between parental educational practices (affect and communication, promotion of autonomy, psychological control, self-disclosure and humor) and life satisfaction in adolescence was mediated by Positive affect and the personality trait of agreeableness acted in causal chain series. Consequently, the different parental educational practices will have a positive or negative effect on Positive affect, which will lead to an increase or decrease in agreeableness, which will, in turn, encourage the adolescent to experience greater or lesser satisfaction with life. These findings point to the importance of contributing from the family to the experimentation of positive affect, since a positive affectivity will contribute to the development of the personality trait of agreeableness, which, as has been shown in previous research, is closely linked to prosocial behavior and socialization in adolescence.

Disclosure

The authors report no conflicts of interest in this work.

References

1. Jiménez TI, Estévez E, Murgui S. Community environment and attitude toward authority: relations with quality of family relationships and aggression toward peers in adolescents. *Ann Psychol*. 2014;30(3):1086–1095. doi:10.6018/analesps.30.3.160041
2. Suárez PA. El papel de la familia en el desarrollo social del niño: una mirada desde la afectividad, la comunicación familiar y estilos de educación parental [The role of the family in the social development of the child: a look from affectivity, family communication and parenting styles]. *Psicoespacios*. 2018;12(20):173–198. doi:10.25057/21452776.1046
3. Alarcón R. Funcionamiento familiar y sus relaciones con la felicidad [Family functioning and its relationship to happiness]. *Revista Peruana de Psicología y Trabajo Soc*. 2017;3(1):61–74.
4. Bowlby J. *Vínculos Afectivos: Formación, Desarrollo y Pérdida [The Making and Breaking of Affectional Bonds]*. Madrid: Morata; 2014. Spanish.
5. Prioste A, Tavares P, Silva CS, Magalhães E. The relationship between family climate and identity development processes: the moderating role of developmental stages and outcomes. *J Child Fam Stud*. 2020;29(6):1525–1536. doi:10.1007/s10826-019-01600-8
6. Estévez E. La familia y la educación [The family and parenting]. In: Estévez E, Musitu G, editors. *Intervención Psicoeducativa En El Ámbito Familiar, Escolar y Comunitario [Psychoeducational Intervention in the Family, Schools, and the Community]*. Paraninfo; 2016:31–54. Spanish.
7. Mazo YI, Mejía LA, Muñoz YP. Calidad de vida: la familia como una posibilidad transformadora [Quality of life: the family as a transforming possibility]. *Revista Poiésis*. 2019;36:98–110. doi:10.21501/16920945.3192. Spanish
8. Oropesa NF. Assessment of the family context in adolescence: a systematic review. *Adolescents*. 2022;2(1):53–72. doi:10.3390/adolescents2010007
9. Oliva E, Villa VJ. Hacia un concepto interdisciplinario de la familia en la globalización [Towards an interdisciplinary concept of family in Globalization]. *Justicia Juris*. 2014;10(1):11–20. doi:10.15665/rj.v10i1.295. Spanish
10. Sigüenza W, Buñay R, Guamán-Arias M. Funcionamiento familiar real e ideal según el modelo Circumplejo de Olson [Real and ideal family functioning according to Olson's circumplex model]. *Maskana*. 2017;8:77–85. Spanish.
11. Fiallos KMB, Delgado AD. Relación entre la conducta antisocial y delictiva con la funcionalidad familiar en adolescentes [Relationship between antisocial and criminal behavior with family functionality in adolescents]. *Ciencia Latina Revista Científica Multidisciplinar*. 2022;6(3):3267–3285. Spanish.
12. Romero AM, Jiménez LR. Clima social familiar ¿Qué relación tiene con el autoconcepto en adolescentes del Callao? [Family social climate What is its relationship with the self-concept in adolescents from Callao?]. *Casus*. 2019;4(2):120–129. Spanish.
13. Sánchez SM, Aragón MM, Agudo FV, et al. Funcionamiento familiar en adolescentes en riesgo de suicidio con rasgos de personalidad límite: un estudio exploratorio [Family functioning in adolescents at risk of suicide with borderline personality traits: an exploratory study]. *Revista de Psicología Clínica con Niños y Adolescentes*. 2020;7(2):50–55. Spanish.
14. Verdugo JC, Arguelles J, Guzmán J, Márquez C, Montes R, Uribe I. Influencia del clima familiar en el proceso de adaptación social del adolescente [Influence of the family climate in the process of social adaptation of the adolescent]. *Psicología desde el Caribe*. 2014;31(2):207–222. Spanish.
15. Coelho CC, Dell'Aglio DD. School climate and school satisfaction among high school adolescents. *Psicol Teor Prat*. 2019;21(1):265–281.
16. Álvarez J, Barreto FJ. Clima familiar y su relación con el rendimiento académico en estudiantes de Bachillerato [Family climate and its relation to academic performance in high school students]. *Revista de Psicología y Educación*. 2020;15(12):166–183. doi:10.23923/rpye2020.02.194. Spanish
17. García MDC, Parra Á, Sánchez-Queija MI, Coimbra S, Oliveira JE. Estilos educativos parentales y malestar psicológico en adultos emergentes universitarios del sur de Europa [Parental educational styles and psychological distress in emerging adult university students in Southern Europe]. Lecture presented at: V Congresso iberoamericano e Luso-Brasileiro de Psicologia da Saúde e I Congresso Promoção da Saúde e do Bem-Estar no Ensino Superior. 2019 May 9–1; Faro, Portugal. Spanish.
18. Martín N, Cueli M, Cañamero LM, González-Castro P. ¿Qué sabemos sobre los estilos educativos parentales y los trastornos en la infancia y adolescencia?: una revisión de la literatura [What do we know about parental educational styles and disorders in childhood and adolescence?: a review of the literature]. *Revista de Psicología y Educación*. 2022;17(1):44–53. doi:10.23923/rpye2022.01.215. Spanish
19. Oliva A, Parra Á, Sánchez-Queija I, López F. Estilos educativos materno y paterno: evaluación y relación con el ajuste adolescente [Maternal and paternal parenting styles: assessment and relationship with adolescent adjustment.]. *Anales de Psicología*. 2007;23(1):49–56. Spanish.
20. Rosa-Alcázar Á, Parada-Navas JL, Olivares-Olivares PJ, Bernal Ruiz C, Rosa-Alcázar AI. Estilos educativos parentales y emociones como predictores de respuestas obsesivo-compulsivas en población adolescente [Parental educational styles and emotions as predictors of obsessive-compulsive responses in the adolescent population]. *Terapia Psicológica*. 2019;37(3):241–254. doi:10.4067/S0718-48082019000300241. Spanish
21. Bernal-Ruiz F, Ortega A, Rodríguez-Vera M. The influence of parental skills on children executive performance in the Chilean context. *J Child Fam Stud*. 2020;29(11):3103–3116. doi:10.1007/s10826-020-01827-w
22. Quiroz-Figueroa MSQ, Lucas-Choéz MML, Quijije_Segovia SK, Gutiérrez-Cedeño MAG. Prevención de conductas de riesgo en el adolescente: rol de la familia [Prevention of risk behaviors in adolescents: role of the family]. *Dominio de las Ciencias*. 2021;7(5):34–52. Spanish.
23. Altschul M. *Limites Jugados: Tejiendo Afectos En Tiempos de Desborde [Played Limits: Weaving Affections in Times of Overflow]*. Cava: Letra Viva; 2021. Spanish.
24. Bögels SM, Brechman-Toussaint ML. Family issues in child anxiety: attachment, family functioning, parental rearing and beliefs. *Clin Psychol Rev*. 2006;26(7):834–856. doi:10.1016/j.cpr.2005.08.001
25. Chainé SM, Pineda FV. Prácticas de crianza asociadas a la reducción de los problemas de conducta infantil: una aportación a la salud pública [Parenting practices associated with the reduction of child behavior problems: a contribution to public health]. *Acta de Investigación Psicológica*. 2014;4(3):1701–1716. doi:10.1016/S2007-4719(14)70975-5. Spanish
26. Fuentes MBG, Palos PA. Percepción de prácticas parentales y ansiedad en adolescentes mexicanos [Perception of parental practices and anxiety in Mexican adolescents]. *Revista de Psicología Clínica con Niños y Adolescentes*. 2021;8(1):54–59. doi:10.21134/rpcna.2021.08.1.7. Spanish
27. Londoño SPV, Reyes LPS, Mendoza MCG, Benavides AMM, Orejuela DC. Tendencias de investigaciones sobre prácticas de crianza en Latinoamérica [Trends in research on parenting practices in Latin America]. *Infancias Imágenes*. 2019;18(2):247–258. doi:10.14483/16579089.14442. Spanish
28. Reina MC, Oliva A, Parra Á. Percepciones de autoevaluación: autoestima, autoeficacia y satisfacción vital en la adolescencia [Adolescents own perceptions of self-evaluation: self esteem, self efficacy and life satisfaction]. *Psychol Soc Educ*. 2010;2(1):55–69. doi:10.25115/psyv.v2i1.435. Spanish
29. Pérez-Fuentes MC, Molero MM, Gázquez JJ, Oropesa NF, Simón MM, Saracostti M. Parenting practices, life satisfaction, and the role of self-esteem in adolescents. *Int J Environ Res Public Health*. 2019;16(20):4045. doi:10.3390/ijerph16204045

30. Cenkseven-önder F. Parenting styles and life satisfaction of Turkish adolescents. *Educ Res Rev Educ.* 2012;7:577. Available from: <http://www.academicjournals.org/ERR>.
31. Milevsky A, Schlechter M, Netter S, Keehn D. Maternal and paternal parenting styles in adolescents: associations with self-esteem, depression and life-satisfaction. *J Child Fam Stud.* 2007;16:39–47. doi:10.1007/s10826-006-9066-5
32. Bieda A, Hirschfeld G, Schönfeld P, Brailovskaia J, Lin M, Margraf J. Felicidad, satisfacción con la vida y salud mental positiva: investigación de los efectos recíprocos durante cuatro años en una muestra de estudiantes chinos [Happiness, life satisfaction, and positive mental health: four-year inter-effects investigation in a sample of Chinese students]. *J Res Pers.* 2019;78:198–209. doi:10.1016/j.jrp.2018.11.012. Spanish
33. Danner DD, Snowdon DA, Friesen WV. Positive emotions in early life and longevity: findings from the nun study. *J Pers Soc Psychol.* 2001;80:804–813. doi:10.1037/0022-3514.80.5.804
34. García JE. Psicología evolucionista y psicología positiva: convergencias posibles [Evolutionary psychology and Positive psychology: possible convergences]. *Cuadernos de Neuropsicología.* 2021;15(1):130–158. Spanish.
35. Pais-Ribeiro J. Psicología positiva 2.0. [Positive psychology 2.0]. *Psicologia Saúde Doenças.* 2021;22(1):14–24. doi:10.15309/21psd220103. Spanish.
36. Rincón FA, Neira CA, Pedroso JDS. El papel del optimismo en la salud mental de los adolescentes: una revisión sistemática [The role of optimism in adolescent mental health: a systematic review]. *Revista de Estudios de la Felicidad.* 2021;2021:1–31. Spanish.
37. Guijarro A, Martínez A, Fernández V, Alcántara-López M, Castro M. Satisfacción con la vida en adolescentes: relación con el estilo parental, el apego a los iguales y la inteligencia emocional [Life satisfaction in adolescents: relationship with parental style, peer attachment and emotional intelligence]. *Electron J Res Educ Psychol.* 2021;19(1):51–74. doi:10.25115/ejrep.v19i53.3425. Spanish.
38. Seligson JL, Huebner ES, Valois RF. Brief multidimensional students' life satisfaction scale (BMSLSS) [measurement instrument]. Available from: http://www.psych.sc.edu/faculty/Scott_Huebner. Accessed August 15, 2022.
39. Casas F, Tiliouine H, Figuer C. The subjective well-being of adolescents from two different cultures: applying three versions of the PWI in Algeria and Spain. *Soc Indic Res.* 2013;115:637–651. doi:10.1007/s11205-012-0229-z
40. Diener E. Subjective well-being. *Psychol Bull.* 1984;95(3):542–575. doi:10.1037/0033-2909.95.3.542
41. Montoya-Gaxiola LD, Corona-Figueroa BA. Dinámica familiar y bienestar subjetivo en adolescentes [Family dynamics and subjective well-being in adolescents]. *Enseñanza e Investigación en Psicología.* 2021;3(1):59–77. Spanish.
42. Rees G. Comparación del bienestar subjetivo de los niños en El Mundo: resultados de la tercera oleada del estudio Children's Worlds [Comparison of the subjective well-being of children in the world: results of the third wave of the Children's Worlds study]. *Sociedad e Infancias.* 2021;5:35–47. doi:10.5209/soci.72096. Spanish.
43. Diener E. El bienestar subjetivo [Subjective well-being]. *Intervención Psicosocial.* 1994;3(8):67. Spanish.
44. Cohn MA, Fredrickson BL, Brown SL, Mikels JA, Conway AM. Happiness unpacked: positive emotions increase life satisfaction by building resilience. *Emot.* 2009;9(3):361–368. doi:10.1037/a0015952
45. Morales JF, López MP. Relaciones entre estilos de personalidad y satisfacción autopercibida en diferentes áreas vitales [Relationships between personality styles and life domains satisfaction]. *Psicothema.* 2002;14(1):100–105.
46. Sánchez P, Quiroga A. Relaciones entre satisfacción familiar y laboral: variables moduladoras [Relations between family and job satisfaction: modulating variables]. *Anales de Psicología.* 1995;11(1):63–76.
47. Cassà EL, Pérez-Escoda N, Alegre A. Competencia emocional, satisfacción en contextos específicos y satisfacción con la vida en la adolescencia [Emotional competence, satisfaction in specific contexts and satisfaction with life in adolescence]. *Revista de Investigación Educativa.* 2018;36(1):57–73. doi:10.6018/rie.36.1.273131
48. Limonero JT, Tomás-Sábado J, Fernández-Castro J, Gómez-Romero MJ, Ardilla-Herrero A. Estrategias de afrontamiento resilientes y regulación emocional: predictores de satisfacción con la vida [Resilient coping strategies and emotional regulation: predictors of life satisfaction]. *Psicología Conduct.* 2012;20(1):183–196.
49. Sanmartín MG, Miguel JMT, Navarro PC. Influencia del clima motivacional en educación física sobre las metas de logro y la satisfacción con la vida de los adolescentes [Influence of the motivational climate in physical education on the achievement goals and life satisfaction of adolescents]. *Retos.* 2017;2017(31):157–163.
50. Noriega JAV, Freire HBG, Ortíz PL, Figueroa DG. Satisfacción con la vida y afectos positivos en jóvenes universitarios [Satisfaction with life and positive affects in university students]. *Revista Psicología e Saúde.* 2010;2(1):24–41.
51. John OP, Donahue EM, Kentle RL. *The Big Five Inventory-Versions 4a and 54*. Berkeley: University of California, Institute of Personality and Social Research; 1991.
52. Benet-Martínez V, John OP. Los Cinco Grandes a través de culturas y grupos étnicos: análisis de múltiples rasgos y métodos múltiples de los Cinco Grandes en español e inglés [The big five across cultures and ethnic groups: multi-trait, multi-method analysis of the big five in Spanish and English]. *Revista de Personalidad y Psicología Soc.* 1998;75(3):729.
53. Domínguez-Lara S, Soto CM, Zamudio B, Cordero CKG. Big Five Inventory en universitarios peruanos: resultados preliminares de su validación [Big Five Inventory in Peruvian university students: preliminary results of their validation]. *Psykhé.* 2018;27(2):11.
54. Zamorano ER, Carrillo CÁ, Silva AP, Sandoval AM, Pastrana IMR. Psychometric properties of the big five inventory in a Mexican sample. *Salud Ment.* 2014;37(6):491–497. doi:10.17711/SM.0185-3325.2014.059
55. Carmona-Halty MA, Rojas-Paz PP. Rasgos de personalidad, necesidad de cognición y satisfacción vital en estudiantes universitarios chilenos [Personality traits, need for cognition and life satisfaction in Chilean university students]. *Universitas Psychologica.* 2014;13(1):83–93. doi:10.11144/Javeriana.UPSY13-1.rpnc
56. McCrae RR, Costa PT. Validación del modelo de personalidad de cinco factores a través de instrumentos y observadores [Validation of the five-factor personality model through instruments and observers]. *Revista de Personalidad y Psicología Soc.* 1987;52(1):81.
57. Simkin H, Etchezahar E, Ungaretti J. Personalidad y autoestima desde el modelo de los cinco factores [Personality and self-esteem from the model of the five factors]. *Hologramática.* 2016;17(2):171–193. Available from: <https://dialnet.unirioja.es/servlet/articulo?codigo=5870688>.
58. Martorell C, González R, Ordóñez A, Gómez O. Estudio confirmatorio del Cuestionario de Conducta Prosocial (CCP) y su relación con variables de personalidad y socialización [Confirmatory study of the Prosocial Behavior Questionnaire (CCP) and its relationship with personality and socialization variables]. *Riddep.* 2011;32(1):35–52.

59. Caprara GV, Alessandri G, Di Giunta L, Panerai L, Eisenberg N. Contribution of agreeableness and self-efficacy beliefs to prosociality. *Eur J Pers.* 2009;24(1):36–55. doi:10.1002/per.739
60. Graziano WG, Habashi MM, Sheese BE, Tobin RM. Agreeableness, empathy, and helping: a person x situation perspective. *J Pers Soc Psychol.* 2007;93:583–599. doi:10.1037/0022-3514.93.4.583
61. Iacovella JD, Díaz-Lázaro CM, Richard's MM. Relación entre la empatía y los cinco grandes factores de personalidad en una muestra de estudiantes universitarios [Relationship between empathy and the big five personality factors in a sample of university students]. *Rev Argent Cienc Comport.* 2015;7(2):14–21.
62. Panaccio A, Vandenbergh C. Five-factor model of personality and organizational commitment: the mediating role of positive and negative affective states. *J Vocat Behav.* 2012;80(3):647–658. doi:10.1016/j.jvb.2012.03.002
63. Zhang RP, Tsingan L. Extraversion and neuroticism mediate associations between openness, conscientiousness, and agreeableness and affective well-being. *J Happiness Stud.* 2014;15(6):1377–1388. doi:10.1007/s10902-013-9482-3
64. Fors F, Johansson I. Agreeableness, extraversion and life satisfaction: investigating the mediating roles of social inclusion and status. *Scand J Psychol.* 2021;62(5):752–762. doi:10.1111/sjop.12755
65. Álvarez-García D, García T, Barreiro-Collazo A, Dobarro A, Antúnez Á. Parenting style dimensions as predictors of adolescent antisocial behavior. *Front Psychol.* 2016;7:1383. doi:10.3389/fpsyg.2016.01383
66. Diener E, Emmons RA, Larsen RJ, Griffin S. The satisfaction with life scale. *J Pers Assess.* 1985;49:71–75. doi:10.1207/s15327752jpa4901_13
67. Atienza F, Pons D, Balaguer I, Merita MG. Propiedades psicométricas de la Escala de Satisfacción con la Vida en adolescentes [Psychometric properties of the Life Satisfaction Scale in adolescents]. *Psicothema.* 2000;12(2):314–319. Available from: <https://reunido.uniovi.es/index.php/PST/article/view/7597>.
68. Bedin LM, Sarriera JC. Propriedades psicométricas das escalas de bem-estar: PWI, SWLS, BMSLSS e CAS [Psychometric properties of the well-being scales: PWI, SWLS, BMSLSS and CAS]. *Avaliação Psicológica.* 2014;13(2):213–225. Spanish.
69. Watson D, Clark LA, Tellegen A. Development and validation of brief measures of positive and negative affect: the PANAS scales. *J Pers Soc Psychol.* 1988;54:1063–1070. doi:10.1037/0022-3514.54.6.1063
70. Sandin B. Escalas PANAS de afecto positivo y negativo para niños y adolescentes (PANASN) [The PANAS scales of positive and negative affect for children and adolescents (PANASN)]. *Revista de Psicopatología y Psicología Clínica.* 2003;8(2):173–182. doi:10.5944/rppc.vol.8.num.2.2003.3953. Spanish
71. John OP, Naumann LP, Soto CJ. Paradigm shift to the integrative Big Five trait taxonomy: history, measurement, and conceptual issues. In: John OP, Robins RW, Pervin LA, editors. *Handbook of Personality: Theory and Research.* New York: The Guilford Press; 2008:114–158.
72. Fossati A, Borroni S, Marchione D, Maffei C. The big five inventory (BFI). *Eur J Psychol Assess.* 2011;27(1):50–58. doi:10.1027/1015-5759/a000043
73. Hayes AF. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach.* 3rd ed. New York: The Guilford Press; 2022.
74. Hayes AF, Montoya AKA. Tutorial on testing, visualizing, and probing interaction involving a multicategorical variable in linear regression analysis. *Commun Methods Meas.* 2017;11:1–30. doi:10.1080/19312458.2016.1271116
75. Cohen J. A power primer. *Psychol Bull.* 1992;112:155–159. doi:10.1037/0033-2909
76. Igartua JJ, Hayes AF. Mediation, moderation, and conditional process analysis: concepts, computations, and some common confusions. *Span J Psychol.* 2021;24:e49. doi:10.1017/SJP.2021.46

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>