

# The Mediating Role of Self-Esteem in the Relationship Between Resilience and Satisfaction with Life in Adolescent Students

Pablo Usán Supervía<sup>1</sup>, Carlos Salavera Bordás<sup>1</sup>, Alberto Quílez Robres<sup>2</sup>

<sup>1</sup>Department of Psychology and Sociology, University of Zaragoza, Zaragoza, Spain; <sup>2</sup>Department of Sciences of Education, University of Zaragoza, Zaragoza, Spain

Correspondence: Carlos Salavera Bordás; Alberto Quílez Robres, Email [salavera@unizar.es](mailto:salavera@unizar.es); [aquilez@unizar.es](mailto:aquilez@unizar.es)

**Background:** During their school years, adolescents undergo emotional and motivational experiences that can play a key role in their personal and academic development. This study aims to analyse the relationship between self-esteem, resilience and satisfaction with life.

**Methods:** The study comprised 1592 students. The instruments used were Rosenberg's Self-esteem Scale (RSE), the Brief Resilience Scale (BRS) and the Satisfaction With Life Scale (SWLS). Descriptive statistics, correlations between the variables investigated and investigated and mediation analysis was calculated by SPSS v26.0's MACRO.

**Results:** The results of this study revealed 1) significant correlations between self-esteem, resilience and satisfaction with life. In addition, 2) it was found that self-esteem plays a mediating role in the relationship between resilience and satisfaction with life in adolescents. For all the operations, a  $p \leq 0.05$  level of significance was adopted, with a 95% confidence level.

**Conclusion:** The self-esteem of the students is decisive in the relationship between resilience and satisfaction with life in adolescents. These results emphasise the importance of promoting self-esteem, as mediating variable between the other two constructs, leading to the adequate personal and academic development of students.

**Keywords:** self-esteem, resilience, satisfaction with life, students

## Introduction

Currently, schools are undergoing significant changes at all levels, and educators and pupils are exposed to a large number of personal, academic and social circumstances in a variety of contexts.<sup>1</sup> The operation of psychological variables and the understanding of the cognitive and motivational processes experience by the student population is a hot research topic.<sup>2</sup>

In this way, students face numerous personal and contextual situations that can have a significant impact in their personal and academic performance, especially during adolescence, a particularly crucial period in the life-cycle, when adult personality is being forged.<sup>3</sup> While most students go through this stage without suffering major personal or academic issues, others may undergo more or less prolonged feelings of lack of motivation, stress, anxiety, pessimism and other variables that can undermine their commitment to their school tasks and even trigger early school dropout.<sup>4</sup>

One of the most widely studied self-referential variables, having a very significant impact on learning processes, is self-esteem, which is defined as the concept that an individual has about herself or himself and about her or his skills and personal qualities.<sup>5</sup>

As pointed out by Lars and Ferguson,<sup>6</sup> self-esteem has two main dimensions: self-liking and self-competence. The former refers to the individual's positive or negative self-concept; the second refers to the individual's expectations about his or her own ability to meet challenges successfully, that is, their self-efficacy in terms of personal competence.

Self-esteem is an intrapersonal variable that enables the individual to act independently from his or her success or failures. The greater the self-esteem, the more likely it is that the individual will do his or her utmost to adapt to every situation.<sup>7</sup> Self-esteem is a factor in the process of the individual's personal development, so its characterisation varies depending on the interaction of the individual with the contextual variables in his or her life-cycle. In adolescence, the context is dominated by family, school and the social circle. High levels of self-esteem in the academic context are typically related to good school performance<sup>8,9</sup> and a widening of the social circle and the positive evaluation of personal relationships,<sup>10,11</sup> as well as to other psychological variables leading to improved intrapersonal skills and personal wellbeing.<sup>12–14</sup>

Adolescence, at any rate, is the period in which self-esteem faces greater challenges, mostly in relation to the individual's perception of the opinion of others. For this reason, encouraging self-esteem and other associated variables can be crucial for the adequate academic and personal development of the individual.<sup>5</sup>

Resilience, for its part, is a relatively new construct in the field of psychology.<sup>15</sup> Resilience refers to the human ability to be successful or overcome adverse and stressing situations.<sup>16</sup> In this way, resilience can be seen as a protection mechanism that enables the individual to turn negative conditions into occasions for achievement, a set of personal factors allowing the individual to evolve and achieve capably and confidently.<sup>17</sup>

Currently, resilience is regarded as a dynamic (ie non-static) process, which largely results from the way individuals interact with, and adapt to, conflicts arising in his or her immediate environment.<sup>18</sup>

The literature on resilience in academic contexts relates this factor to emotional exhaustion,<sup>19</sup> personal and academic self-efficacy,<sup>20</sup> emotional intelligence,<sup>21</sup> self-esteem,<sup>22</sup> optimism,<sup>23</sup> social support<sup>24</sup> and anxiety.<sup>25</sup> In general, in students resilience is positively correlated to life satisfaction and commitment to school tasks.<sup>26</sup>

As such, resilience is relevant for the personal and psychological development of students, and high levels of resilience have a positive effect on the students' ability to adapt to their social context and its challenges.<sup>27,28</sup>

Finally, satisfaction with life is the cognitive factor – combined with an emotional one (positive and negative affects) – of the construct known as subjective wellbeing.<sup>29</sup> Satisfaction with life reflects the overall perception of different aspects of a person's life. According to Diener,<sup>30</sup> wide agreement exists about the basic variables of subjective wellbeing: (1) it springs from personal experiences and their evaluation; (2) it includes positive dimensions, not only the absence of negative ones, and; (3) it includes global evaluations of the individual's life.

Concerning the cognitive component, satisfaction with life refers to the global evaluation that the individual makes about his or her own personal circumstances.<sup>31</sup> The individual assesses tangible aspects of his or her life, weighing the good and the bad, and reaches a conclusion about how satisfactory the result is.<sup>29</sup>

Research on satisfaction with life has largely focused on determining psychological and social risks, based on the idea that this variable can be used to predict pathological conditions, and the handling of stressing situations and its possible effect on conduct.<sup>32,33</sup>

Satisfaction with life in children and adolescents has been paid much less scholarly attention than in adults,<sup>34</sup> but the few existing studies agree that this factor presents idiosyncratic characteristics in the early stages of the individual's life-cycle.<sup>29</sup>

For all of this, and following Méndez,<sup>35</sup> more studies are necessary to increase our understanding of the different variables involved in academic performance, and to develop strategies to improve the students' personal development and academic satisfaction, ultimately contributing to reduce early school dropout.<sup>36</sup>

In this context, and given the absence of studies that directly relate the variables under consideration, the main aim of this study is to analyse the relationship between resilience, self-esteem and satisfaction with life in a sample of adolescent secondary school students. Precisely, the fact that there are no studies that relate these variables is in itself a significant fact of study. Then, as we verified in the introduction, numerous studies study self-esteem but not as a mediating variable between other constructs. Finally, resilience and life satisfaction are two theoretically adaptive variables that we desire to check how they behave by introducing the self-esteem variable as a personal assessment of oneself. All this can give us clues to investigate and act in the educational system and to improve the teaching-learning processes with the students.

The study's two main hypotheses are:

- (a) Self-esteem is related to resilience and satisfaction with life in adolescent students, leading to adaptive behaviours.
- (b) Self-esteem plays a mediating role in the relationship between resilience and satisfaction with life.

## Method

### Sample

The sample comprises 1592 students. Inclusion criteria were the ability to read and communicate in perfect Spanish (a necessary condition to understand the questionnaires). Incomplete questionnaires (35) and students with cognitive disorders that hampered the full understanding of the questionnaires were excluded. The schools were chosen by random sampling and all students in the chosen schools were furnished with a questionnaire; 98.89% of questionnaires were returned and counted. Simple random sampling is a probability sampling procedure that gives each item in our study population an equal chance of being selected.

### Instruments

The following questionnaires were used.

Self-esteem was measured using Rosenberg's Self-esteem Scale (RSE)<sup>37</sup> validated for and adapted to Spanish adolescents by Martín, Núñez, Navarro and Grijalva.<sup>38</sup> This mono-factorial scale comprises ten items that measure self-esteem in academic contexts (eg "I feel that I'm a person of worth, at least on an equal plane with others"). Answers are expressed in a 5-point Likert scale ranging from "Strongly disagree" (1) to "Strongly agree" (5). In terms of reliability, the translated version of the questionnaire has yielded a Cronbach- $\alpha$  value of 0.79, and of 0.82 in our study.

Concerning resilience, the Brief Resilience Scale (BRS)<sup>39</sup> translated and adapted to Spanish adolescents by Rodríguez, Alonso and Hernansaiz<sup>40</sup> was used. This mono-factorial scale comprises 6 items (eg "I tend to bounce back quickly after hard times"). Answers are expressed in a 5-point Likert scale ranging from "Strongly disagree" (1) to "Strongly agree" (5). The original instrument yields a Cronbach- $\alpha$  value of 0.88, and of 0.89 in our study.

Finally, with regard to satisfaction with life, Diener, Emmons, Larsen and Griffin's Satisfaction With Life Scale (SWLS),<sup>41</sup> translated and validated for Spanish adolescents by Pons, Atienza, Balaguer and García-Merita.<sup>42</sup> The scale comprises 5 items that measure the degree of satisfaction with life (eg "I am satisfied with life). Answers are expressed in a 5-point Likert scale ranging from "Strongly disagree" (1) to "Strongly agree" (5). The original instrument yields a Cronbach- $\alpha$  value of 0.84, and of 0.85 in our study.

### Protocol

The questionnaires were handed out to the students in the classrooms, all students in each school receiving the questionnaire in the same day, set out in advance in coordination with the school's management. The parents/tutors signed informed consent forms. All parents/tutors were informed about the nature of the study, and participation was voluntary, in line with the ethical directives set out in the Declaration of Helsinki.<sup>43</sup> The protocol was endorsed by the Ethics Committee of the Psychology and Sociology Department, University of Zaragoza. Questionnaires were anonymous and confidential, and students could opt out at any point in the process.

### Data Analysis

Descriptive statistics were undertaken to establish the socio-demographic profile of the sample, including such variables as gender, age, course, type of school and course repeats, as well as the variables analysed in the study. Following this, correlations between the variables were investigated using statistical software IBM SPSS v26.0. Finally, SPSS v26.0's MACRO tool was used to carry out mediation analyses by bootstrapping (10,000 runs). For all the operations, a  $p \leq 0.05$  level of significance was adopted, with a 95% confidence level.

## Results

### Demographic Variables

The sample comprises 1592 students, both male (N=864; 54.27%) and female (N=728; 45.72%), with ages ranging from 12 to 19 years (M=14.84; SD=1.68) from secondary schools (Table 1).

### Descriptive Variables

As illustrated in Table 2, self-esteem was found to have a statistically significant but slight effect, being slightly more pronounced in females (Cohen's  $d = 0.305$ ).

The resilience variable yielded slightly higher results in males; in terms of satisfaction with life, females yielded slightly higher results than males.

### Correlational Analysis Between Self-Efficacy, Optimism and Academic Performance

Table 3 illustrates correlations between the variables under consideration. They all present significant correlations, but in different ways.

**Table 1** Socio-Demographic Characteristics of the Sample

		N	%
<b>Gender</b>	Male	864	54.27
	Female	728	45.72
<b>Age</b>	12 years	189	11.87
	13 years	222	13.94
	14 years	239	15.01
	15 years	331	20.79
	16 years	376	23.61
	17 years	139	8.73
	18 years	77	4.83
	19 years	19	1.19
<b>Academic year</b>	1° ESO*	251	15.76
	2° ESO	306	19.22
	3° ESO	376	23.61
	4° ESO	423	26.57
	1° BACH*	169	10.61
	2° BACH	67	4.20
<b>Repeating course</b>	Yes	359	22.55
	No	1233	77.44
<b>Type of school</b>	Public	1024	64.32
	Private	568	35.67

**Notes:** \*Refers to Spanish stages ESO: 11/12–15/16 years old; BACH 16/17–18/19 years old.

**Table 2** Results of Descriptive Variables Self-Esteem, Resilience and Satisfaction with Life

	Total		Male		Female		Cohen's $d$
	$x$	$sd$	$x$	$sd$	$x$	$sd$	
<b>Self-esteem</b>	3.87	0.77	3.99	0.68	3.76	0.82	0.305
<b>Resilience</b>	2.76	0.96	2.77	0.84	2.75	1.01	0.021
<b>Satisfaction with life</b>	3.01	1.03	3.00	1.10	3.01	0.98	-0.009

**Table 3** Correlational Analysis Between Self-Esteem, Resilience and Satisfaction with Life

	1	2	3
<b>Self-esteem</b>	1		
<b>Resilience</b>	0.371**	1	
<b>Satisfaction with life</b>	0.313**	0.160*	1
Mean (X)	3.87	2.76	3.01
SD	0.77	0.96	1.03
Cronbach's alpha	0.82	0.89	0.85

**Notes:** \*\*Correlation significant at 0.01 level. \*Correlation significant at 0.05 level.

Self-esteem was found to be positively correlated with resilience ( $r=0.371$ ) and satisfaction with life, while the correlation between resilience and satisfaction with life was found to be much weaker ( $r=0.160$ ).

## Mediation Model Effects of Self-Efficacy in the Relationship Between Optimism and Academic Performance

In order to establish whether the relationship between resilience and satisfaction with life is mediated by self-esteem, Hayes's<sup>44</sup> MACRO tool in Process 3.0 de SPSS (v 26.0) was used, following the methodology put forth by Tal-Or, Cohen, Tsarfati and Gunther.<sup>45</sup>

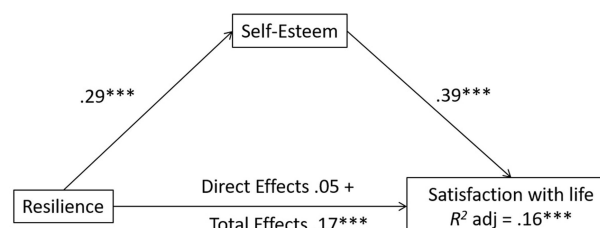
As shown in Figure 1, self-esteem was found to mediate in the relationship between resilience and satisfaction with life. The results indicate a mediating effect of resilience (VI) on self-esteem of 0.29, and self-esteem to have a mediating effect on satisfaction with life (VD) of 0.39; in both cases  $p>0.001$ . Zero was not included in the bootstrap interval,  $B=0.11$ ,  $SE=0.02$ , 95% [CI 0.06, 0.16] so it can be argued that self esteem mediates in the relationship between resilience and satisfaction with life.

These results suggest that, in and by itself, resilience has no direct significant effect on satisfaction with life (0.05,  $p < 0.10$ ), but its combination with self-esteem yields a result of 0.17,  $p < 0.001$  (direct effect + indirect effect), the proportion of variance being explained by model  $R^2=0.16^{***}$ . This suggests that self-esteem plays a mediating role in the relationship between the other variables. This has important practical implications.

## Discussion

The aim of this study was to analyse the relationship between self-esteem, resilience and satisfaction with life in adolescent secondary school students.

The first hypothesis, that self-esteem is related to resilience and life satisfaction, was fully confirmed; the results show that self-esteem is positively correlated with resilience and with satisfaction with life. Generally, the relationship between self-esteem and resilience has been analysed alongside other variables, with varying results. Moyano<sup>46</sup> establishes a relationship between these constructs and with other socio-demographic variables in a sample of secondary school students; Wong<sup>47</sup> reaches similar conclusions, while also considering different types of school; Oñate and García<sup>48</sup> relate



**Figure 1** Mediating role of self-esteem in the relationship between resilience and satisfaction with life.

**Note:** \*\*\*The correlation is significant at 0.001 ( $p<0.001$ ).

self-esteem and resilience to positive self-concept; Aydın and Güneri<sup>49</sup> argue that emotional regulation is a key factor in the relationship between self-esteem and resilience; Martínez, Youssef, Chambel and Marques-Pinto<sup>50</sup> develop similar arguments, also taking into consideration academic engagement, in their consideration of the factors that affect academic performance. Furthermore, although few in number, some studies find that there is no significant relationship between resilience and self-esteem in adolescent students<sup>51,52</sup> in contrast with our own conclusions.

On the other hand, there is wide consensus about the reciprocal nature of the relationship between resilience and satisfaction with life in adolescents<sup>53,54</sup> but also in university students.<sup>55</sup>

Our second hypothesis, that self-esteem plays a mediating role between resilience and satisfaction with life, was also confirmed, as self-esteem was found to have an effect on the other two variables. These results must be examined in detail. On the one hand, the variables under study present bidirectional correlations with one another. On the other hand, the results of mediation analysis suggests that resilience is a poor predictor of satisfaction with life; that is, the effect of the former over the latter is not statistically significant. Various studies describe this relationship in adult populations,<sup>32,56</sup> but little attention has been paid to it in academic contexts.<sup>57</sup>

At any rate, self-esteem was found to play a significant mediating role in the relationship between the other two constructs. Although numerous studies have examined the mediating role of self-esteem on other academic variables, no previous study has specifically addressed the mediating role of self-esteem in the relationship between resilience and satisfaction with life. However, some studies examine these constructs from different perspectives: Arslan<sup>58</sup> establishes the mediating role of self-esteem in the relationship between resilience and satisfaction with life in adolescents, and the importance of having high levels of self-esteem are emphasised; González, Domínguez and Valdez<sup>59</sup> examine the role of self-esteem over resilience and positive affects in a sample of Mexican students; Kapıkıran and Acun-Kapıkıran<sup>60</sup> present similar arguments, establishing the relationship between self-esteem, resilience and optimism in a sample of university students. Other studies that focus on academic contexts consider that self-esteem is the most reliable variable to predict life satisfaction in adolescents.<sup>61</sup> High levels of self-esteem tend to go hand-in-hand with high levels of satisfaction with life<sup>62-64</sup> and vice versa.<sup>65</sup>

## Limitations of the Study

The limitations of this study are chiefly related to its lateral nature. Data-collection was a one-off event, and as a result the data have not temporal depth, while scores can easily change significantly from year to year, and even within the same school year, depending on personal circumstances. In a similar fashion, the schools were selected randomly, and are not a reliable section of the city in which the study was undertaken in terms of types of school, students and teachers, socio-economic conditions and social/cultural settings.

## Conclusions

These results emphasise the importance of self-esteem for adolescent students, specifically in the relationship between resilience and satisfaction with life, with direct implications for educational policies. On the one hand, our results have practical implications for educational strategies, namely the promotion of teaching strategies to promote self-esteem and resilience to confront school tasks, and encouraging self-determined and motivated behaviours from an early age, such as the development of self-efficacy, dedication and intrinsic motivation towards school tasks, helping students to feel more confident at school. Similarly, programmes directed by psychology and educational professionals can also help to improve students' overall experience, decreasing the risk of early school dropout.

On the other hand, future studies should examine the role that self-esteem plays for students as well as its influence in other psychological variables. It is also necessary to undertake longitudinal studies that allow us to examine the evolution of these constructs over a longer time span, although the methodological challenges that these studies pose must be recognised. In addition, it would be interesting to take into consideration other academic tiers, such as primary school (6–11 years) and university (18 years and over). It would also be of interest to take into consideration other socio-demographic variables.

Finally, it is worth emphasising that our results are but one step which encourages us to continue our research in the field of educational psychology and, specifically, in the characterisation of the different variables that affect the personal and academic development of adolescent students.



## Author Contributions

All authors made a significant contribution to the work reported, whether that is in the conception, study design, execution, acquisition of data, analysis and interpretation, or in all these areas; took part in drafting, revising or critically reviewing the article; gave final approval of the version to be published; have agreed on the journal to which the article has been submitted; and agree to be accountable for all aspects of the work.

## Disclosure

The authors declare no conflict of interests in this research.

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