



Perfectionism and academic achievement in Spanish adolescents: The mediating role of anxiety, self-esteem, and affect

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Título: Perfeccionismo y rendimiento académico en adolescentes españoles: el rol mediador de la ansiedad, la autoestima y el afecto.

Resumen: Este estudio tuvo como objetivo analizar la relación entre el perfeccionismo y el rendimiento académico, considerando el efecto de la ansiedad estado, la ansiedad rasgo, la autoestima y el afecto positivo y negativo. El estudio incluyó una muestra de 202 estudiantes de Educación Secundaria y Bachillerato (46.5% hombres y 53.5% mujeres, $M = 14.79$ años, $DT = 1.68$), quienes completaron escalas validadas en clase, incluyendo la Escala de Perfeccionismo Infantil y Adolescente, la Escala de Autoestima de Rosenberg, el Inventario de Ansiedad Estado-Rasgo, y la Escala de Afecto Positivo y Negativo. El estudio siguió un diseño correlacional transversal y se probaron modelos de mediación para determinar las hipótesis direccionales. El perfeccionismo auto-orientado se relacionó positivamente con el rendimiento académico ($\beta = .463$; $p < .001$), mientras que el perfeccionismo socialmente prescrito fue un predictor negativo de las calificaciones de los estudiantes ($\beta = -.171$; $p = .017$). Se encontró que la autoestima ($\beta = -.051$; $p = .020$) y la ansiedad estado ($\beta = -.045$; $p = .042$) median la relación entre el perfeccionismo y el rendimiento académico. Estos hallazgos sugieren que las escuelas deberían implementar programas para reducir el perfeccionismo socialmente prescrito, fomentar la autoestima y gestionar la ansiedad estado. El estudio también contribuye a la teoría al clarificar los efectos diferenciados del perfeccionismo autoorientado y el socialmente prescrito, guiando intervenciones específicas para apoyar el bienestar emocional y el éxito académico de los estudiantes.

Palabras clave: Perfeccionismo. Rendimiento académico. Autoestima. Ansiedad. Afecto. Educación secundaria.

Abstract: This study aimed to analyse the relationship between perfectionism and performance, considering the effect of state anxiety, trait anxiety, self-esteem and positive and negative affect. The study included a sample of 202 students of Secondary Education and Baccalaureate (46.5% males and 53.5% females, $M = 14.79$ years, $SD = 1.68$) who completed validated scales in class including the Child and Adolescent Perfectionism Scale, Rosenberg Self-Esteem Scale, State-Trait Anxiety Inventory, and the Positive and Negative Affect Scale. The study followed a cross-sectional correlational design, and mediation models were tested to determine the directional hypotheses. Self-Oriented Perfectionism was positively related to academic performance ($\beta = .463$; $p < .001$), while Socially Prescribed Perfectionism was a negative predictor of students' grades ($\beta = -.171$; $p = .017$). Self-esteem ($\beta = -.051$; $p = .020$) and state anxiety ($\beta = -.045$; $p = .042$) were found to mediate the relationship between perfectionism and academic achievement. These findings suggest that schools should implement programs to reduce socially prescribed perfectionism, boost self-esteem, and manage state anxiety. The study also contributes to theory by clarifying the distinct effects of self-oriented and socially prescribed perfectionism, guiding targeted interventions to support students' emotional well-being and academic success.

Keywords: Perfectionism. Academic achievement. Self-esteem. Anxiety. Affect. Secondary education.

Introduction

Perfectionism has been conceived as an important personality component that may affect multiple aspects of psychological and educational functioning (Hewitt & Flett, 1991). It can be defined as a search for perfection through the use of high personal goals or standards, the effort to achieve them and the critical evaluation of one's own capabilities (Flett & Hewitt, 2002, 2006). Recent meta-analyses and longitudinal studies have shown that the prevalence of perfectionism among adolescents and young adults has grown significantly in the last three decades, with current cohorts reporting higher self-imposed standards and greater pressure to meet external expectations compared to previous generations (Madigan, 2019); with one in four adolescents reporting the need and pressure to be perfect (Flett & Hewitt, 2022). Conceptually, from a unidimensional perspective, perfectionism has been considered a neurotic component of a person, as a high percentage of patients with anxiety and depression have considerable levels of perfectionist traits (Stoeber, 2012). For this reason, the first scientific studies considered perfectionism as a negative personality factor connected with one's self-demands for success.

In recent years, perfectionism has adopted a multidimensional perspective, including positive and functional components (Hamachek, 1978; Stoeber, 2012). Several authors differentiated two key dimensions: perfectionistic strivings and perfectionistic concerns. The former refers to setting high personal standards and striving for excellence, while the latter involves fear of failure, self-doubt, and concern over others' evaluations. Although these dimensions are positively correlated, they show distinct patterns in their outcomes. Perfectionistic strivings are generally linked to adaptive traits such as conscientiousness, motivation, self-esteem, and well-being. In contrast, perfectionistic concerns are associated with maladaptive outcomes, including neuroticism, negative affect, and psychological distress (Stoeber, 2012; Doyle & Catling, 2022; Vacca et al., 2020).

According to the theoretical framework developed by Hewitt and Flett (1991), perfectionism can be composed by three dimensions: self-oriented perfectionism (SOP), socially prescribed perfectionism (SPP), and other-oriented perfectionism (OOP). Regarding the first, it is defined as the way in which individuals set extremely high standards to oneself and assess their own behavior based on these standards. The second type is based on the belief that others may have too

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strict and low realistic expectations about the self's results. The last dimension refers to the establishment of higher expectations and goals than others, making judgment about the outcomes obtained.

Although perfectionistic strivings and concerns are broader dimensions of perfectionism (Stoeber & Otto, 2006), self-oriented perfectionism, together with the Personal Standards scale of the FMPS, generally represents the striving dimension. In contrast, socially prescribed perfectionism, along with the Concern over Mistakes and Doubts about Actions scales of the FMPS, corresponds more closely to perfectionistic concerns (Gaudreau & Thompson, 2010).

Literature Review and Hypothesis Development

Educational context integrates relevant factors associated with perfectionism during adolescence. For instance, academic satisfaction predicts higher personal standards and lower level of one's own concerns (Stricker et al., 2019). Flett et al. (2016) found that SOP and SPP were associated with substantial educational stress among adolescents from China. Seong and Chang (2021), using a person-centered approach, found that students classified as maladaptive perfectionists or non-perfectionists reported fewer positive academic emotions than adaptive perfectionists, who combine high self-imposed standards with low concern over external expectations. The authors emphasized that fostering positive academic emotions requires not only reducing socially prescribed standards but also encouraging students to set and strive toward their own high goals. Kuusi et al. (2024) found that lower secondary students with both high perfectionistic strivings and concerns (perfectionists) demonstrated high academic engagement but also reported increased exhaustion, anxiety, and depressive symptoms. In contrast, ambitious students—those with high strivings and low concerns—exhibited strong engagement alongside better emotional well-being. Students with low striving, such as non-perfectionists, were less engaged but experienced fewer negative emotional outcomes.

Building on these conceptualizations, the present study adopts the perspective that perfectionism must be understood within a broader socio-emotional network that includes anxiety, self-evaluative processes, affect, and academic outcomes. Prior longitudinal evidence indicates that self-critical perfectionism intensifies students' anxiety responses to academic difficulties, as these individuals tend to internalize failure and blame themselves rather than attributing setbacks to external circumstances (Stoeber et al., 2014). This mechanism aligns with the deficit model (Tobias, 1984), which proposes that negative academic experiences erode affective self-evaluations and, in turn, impair learning. From this standpoint, maladaptive perfectionism can influence academic performance through multiple interconnected pathways: by undermining self-esteem, by heightening anxiety responses, and by affecting the experience of positive and negative emotions in academic contexts.

Recent empirical findings reinforce this socio-emotional network perspective. For example, self-critical perfectionism has been shown to erode self-esteem, which in turn predicts poorer well-being and learning outcomes (Fekih-Romdhane et al., 2023). Longitudinal studies also indicate that maladaptive perfectionism increases students' vulnerability to test anxiety, compromising their ability to manage academic stress effectively (Zhao et al. 2022). Moreover, emerging evidence highlights that affective experiences themselves act as mediating mechanisms, with negative emotions partially explaining the detrimental impact of perfectionism on performance (Goulet-Pelletier et al., 2025).

Accordingly, this study adopts the dynamic socio-emotional network as its central explanatory framework and, based on this rationale, proceeds with a sequential analysis of how each pathway—self-esteem, anxiety, and affect—links perfectionism to academic achievement.

Perfectionism and academic achievement

Research has explored how different dimensions of perfectionism relate to academic achievement. Gaudreau and Thompson (2010) found that students with high levels of SOP showed greater self-determination, academic satisfaction, positive affect, and academic performance. In contrast, students with SPP had the poorest outcomes across these variables, while those with mixed profiles fell in between. Verner-Filion and Gaudreau (2010) explained these differences through motivational patterns: individuals high in SOP are mainly driven by the pursuit of success, whereas those with SPP are motivated by both striving for success and avoiding failure. These findings are consistent with Madigan (2019) and Osenk et al. (2020), who reported that SOP and personal standards are positively linked to academic performance, while perfectionistic concerns and SPP are negatively related.

Longitudinal studies also support this pattern. Endleman et al. (2021) found that academic achievement predicted increases in SOP, suggesting that perfectionism can be shaped by prior success. Similarly, Negru-Subtirica et al. (2022) found that SOP mediated the relationship between achievement and educational commitment over time.

Overall, while many studies emphasize the adaptive role of perfectionistic strivings (Stoeber, 2012), findings related to perfectionistic concerns remain more inconsistent and generally point to a negative impact on academic outcomes.

Based on these findings, the present study hypothesizes (H1) that self-oriented perfectionism will have a strong direct positive relationship with academic achievement, whereas socially prescribed perfectionism will negatively predict achievement.

Perfectionism, self-esteem and academic achievement

In the educational context, socio-emotional variables have been traditionally considered as essential factors that affect the teaching-learning process. Most of the studies focus on self-esteem, which can be defined as the affective evaluation of one's own cognitions (Rosenberg, 1965). This implies that individuals develop feelings about themselves when considering the own personal characteristics distributed in different areas, such as physical, academic, psychological or spiritual (Soest et al., 2016). Prior studies suggest that self-esteem varies across domains and populations, with evidence of systematic gender differences, where males often report higher levels than females (Bleidorn et al., 2016).

Building on this evidence, self-esteem emerges as a central socio-emotional construct that may help explain how perfectionism influences academic achievement. Empirical studies suggest that low self-esteem is consistently associated with maladaptive perfectionism, whereas higher self-esteem tends to buffer its detrimental effects (Chai et al., 2020).

The evidence linking self-esteem and academic achievement, however, remains mixed. While some studies argue that increasing self-esteem interventions does not necessarily improve performance and may even have counterproductive effects (Baumeister et al., 2003), other research reports positive associations between self-esteem, academic interest, and achievement (Akuezuilo et al., 2022). This inconsistency suggests that self-esteem may play a more complex, mediating role rather than a direct one.

Hawkins & Mackinnon (2025) found that students with self-critical perfectionism tend to internalize academic difficulties and direct blame toward themselves, which can undermine affective self-evaluations. This process is particularly relevant for self-esteem, as it indicates that maladaptive perfectionism may erode students' self-worth, thereby increasing vulnerability to anxiety and hindering academic achievement.

Taken together, these findings suggest that self-esteem could be a key mechanism linking perfectionism to academic achievement in adolescence. By examining this mediating role, the present study aims to clarify why perfectionism sometimes fosters achievement but, under different circumstances, contributes to emotional distress and lower performance, leading to the hypotheses that self-esteem will have a positive association with SOP and a negative association with SPP (H2), will positively predict academic achievement (H3) and may mediate the relationship between perfectionism and achievement (H4).

Perfectionism, anxiety and achievement

Anxiety can be considered as one of the main variables related with perfectionism, although there are different findings. For instance, Hewitt et al. (2002), Mills and Blankstein (2000) and Essau et al. (2008) found that SOP and SPP co-

related positively with anxiety, but Egan et al. (2013) found that anxiety was more strongly associated with self-oriented and self-imposed perfectionism suggesting that individuals with high self-demands may be particularly vulnerable to anxiety-related difficulties. At the same time, different results arise when considering anxiety as state or trait. In Mills and Blankstein's (2000), SOP increases state anxiety, while SPP does not, even though both correlate with trait anxiety.

Regarding the implications of anxiety on performance, Morosanova et al. (2019) observed that, after analysing 3 groups of students differentiated in their anxiety levels, those who had very high or very low levels of test anxiety had worse results than those students who had medium levels of anxiety. The authors explain these results through the Yerkes-Dodson Law (Yerkes & Dodson, 1908), which states that anxiety is related in an inverse U-shape with performance, so that moderate levels of anxiety could be beneficial, since it is a motivating factor.

Additionally, some research (Colunga-Rodriguez et al., 2021; Vitasari et al., 2010) has found that students with lower academic achievement presented higher levels of anxiety than those with higher grades, which is also consistent with the Yerkes-Dodson Law, since if these levels of moderate anxiety are exceeded, performance becomes detrimental, affecting working memory and coping ability.

This further underscores the relevance of considering anxiety not only as a consequence of perfectionism but also as a potential mechanism through which different perfectionism dimensions impact academic functioning.

Recent evidence provides more nuanced insights into a mediating role (Lecours et al., 2025). For example, it was found that SPP was indirectly and negatively associated with mathematics achievement through cognitive test anxiety, but weakly and positively associated with language arts achievement through physiological test anxiety. In contrast, SOP showed a direct positive association with mathematics achievement and an indirect positive association with language arts achievement through physiological test anxiety. This further underscores the relevance of considering anxiety not only as a consequence of perfectionism but also as a potential mechanism through which different perfectionism dimensions impact academic functioning, reinforcing its role as a complex mediator.

Based on these findings, we hypothesize that both state and trait anxiety will be positively associated with self-oriented and socially prescribed perfectionism and negatively correlated with academic achievement (H5), while also playing a mediating role in the relationship between perfectionism and academic performance (H6).

Perfectionism, affect, and achievement

Traditionally, negative affect has been negatively correlated with academic achievement. For instance, Kirkcaldy et al. (2004) used PISA data to analyse the relationship between academic achievement and students' wellbeing, finding nega-

tive correlations between achievement and negative affect. In addition, Wu et al. (2020) found that positive affect could predict academic students' academic achievement. The authors explain this association through the importance of the subjective well-being, which is composed by internal process such as affect and other emotions that may achieve the established goals.

Damian et al. (2014) applied Gaudreau and Thompson's (2010) 2x2 model of perfectionism to analyse the association of SOP and PSP with positive and negative affect. Results suggested that students with SOP had the highest levels of positive affect, followed by non-perfectionists, mixed perfectionists and SPP. Moreover, considering negative affect, students with pure SPP had higher levels than non-perfectionists and SOP; although there were no differences between pure PSP and mixed perfectionists (high PSP and high PAO). These results are in line with previous findings, which consider that the efforts to achieve high standard goals are adaptative behaviors and associated with positive affect, whereas perception of others' requirements are maladaptive and may provoke psychological imbalance.

Based on these findings, H7 posits that SOP will have a positive association with positive affect, whereas SPP will be associated with higher negative affect. Furthermore, positive affect is expected to positively predict academic achievement (H8), and H9 proposes that affect (both positive and negative) may serve as a significant mediating variable in the relationship between perfectionism and academic achievement.

The present study

Although the literature has consistently highlighted the positive role of self-oriented perfectionism and the detrimental consequences of socially prescribed perfectionism on students' achievement, most studies have focused on direct associations (Fang and Liu, 2022), often neglecting the socio-emotional mechanisms that may explain these effects. Little is known about how self-esteem, state and trait anxiety, and affect mediate the relationship between perfectionism and academic achievement. Furthermore, existing research has largely concentrated on university populations, while studies in adolescents remain scarce despite the relevance of this developmental stage for consolidating both academic trajectories and personality traits. This lack of evidence constitutes a relevant research gap, as identifying these mediating processes is crucial to understanding not only whether perfectionism influences performance, but also how it exerts its impact. The present study addresses this gap by examining the mediating role of socio-emotional variables in the relationship between perfectionism and academic achievement among adolescents, thereby contributing both theoretically—by clarifying the mechanisms involved—and practically—by informing interventions that promote students' well-being and academic success. Building on this rationale, a more in-depth analysis of this line of work is considered ne-

cessary, through the proposal of an empirical study with the following objectives:

- 1) To examine the relationship between two types of perfectionism (SOP and SPP), and academic achievement.
- 2) To examine the relationship between self-esteem, anxiety, affect and academic achievement.
- 3) To study the mediating role of anxiety, self-esteem and affect in the relationship between each type of perfectionism and academic achievement.

Materials and Methods

Participants

Participants were recruited using a convenience sample of 204 Spanish adolescents from two public secondary schools in the Region of Murcia and from one private school in the Valencian Community, specifically from the province of Alicante. The sampling procedure was non-probabilistic, based on convenience, but schools were selected to include both public and private institutions to capture variability in socio-demographic and educational contexts. The inclusion criteria were enrollment in the selected schools, aged between 11 and 19, and provision of informed consent. The exclusion criteria included incomplete survey responses, scores falling outside the allowable ranges, or students who have diagnosed disabilities. These criteria were established to ensure the homogeneity of the sample in relation to the study variables, and because the instruments employed have not yet been validated for populations with specific educational needs. After data screening, two cases were removed because the reported mean academic grade exceeded the maximum possible value (10). Finally, the analyses were carried out with a total sample of 202 students. The sampling procedure that was used to select participants was non-probabilistic by convenience.

The age of the participants ranged from 11 to 19 years ($M = 14.79$; $SD = 1.68$) and there was a total of 94 boys ($M = 14.9$; $SD = 1.67$) and 108 girls ($M = 14.7$, $SD = 1.69$). It means that a total of 46.5% of the sample was male and 53.5% was female.

Most of the participants were in their second and fourth year of secondary education (i.e., 23.8% and 25.7%, respectively), while only 3.7% were in their second year of Baccalaurate. The percentage of female and male students corresponding to each course can be seen in Table 1.

Table 1
Distribution by gender in the different academic years.

Gender	Grade 7		Grade 8		Grade 9		Grade 10		Grade 11		Grade 12	
	N	%	N	%	N	%	N	%	N	%	N	%
Males	16	42.1	22	45.8	7	58.3	23	44.2	23	51.1	3	42.9
Females	22	57.9	26	54.2	5	41.7	29	55.8	22	48.9	4	57.1
Total	38	100	48	100	12	100	52	100	45	100	7	100

Procedures

This study was designed as a cross-sectional observational study aimed at examining the relationships among perfectionism, socio-emotional variables, and academic achievement in adolescents. Data will be collected through standardized questionnaires assessing key variables: two types of perfectionism (self-oriented and socially prescribed), academic achievement, self-esteem, anxiety, positive affect, and negative affect. Those questionnaires were administered using the survey application of the University of Murcia. Once the survey was created and evaluated, the study protocol was approved by the Ethics Committee of the University of [BLINDED] (approval number: BLINDED), and this approval was communicated to the participating schools, which provided their consent to collaborate. All students were informed of the confidentiality of the data, the voluntariness of participation and the objectives of the research, following the ethical standards indicated by the Ethics Committee of the Spanish University of Researchers, and any doubts that arose at the time of the request were attended by the authors of the research. In addition, a form for the informed consent of minors was provided and signed by parents or legal guardians. Subsequently, and after approval by the schools, the survey was sent to the schools, and was open from March 28, 2023 until May 10, 2023. The tutors of each course were in charge of administering the questionnaire to the students during the tutoring hour. The participants were able to complete the survey through the digital devices allowed by the tutor, such as cell phone, computer or Tablet. Data were collected anonymously, with no identifying information linked to responses, ensuring confidentiality and compliance with ethical standards.

Measures

Child and Adolescent Perfectionism Scale (CAPS)

Flett et al. (2016) developed the Child and Adolescent Perfectionism Scale (CAPS), which is designed to measure perfectionism from a multidimensional perspective in the child and adolescent population. This scale considers that perfectionism is divided in two dimensions: on the one hand Self-Oriented Perfectionism, understood as the tendency to expect perfection in oneself and the motivation to reach certain standards; and on the other hand Socially Prescribed Perfectionism, which is the perception of demand from others. This scale is composed of 22 items, 12 related to the Self-Oriented Perfectionism dimension and 10 associated with the Socially Prescribed Perfectionism dimension.

The age of application is from the age of 8 years. The items are answered through a 5-point Likert-type scale, in which 1 = *False*; 2 = *Mostly false*; 3 = *Neither true nor false*; 4 = *Mostly true*; 5 = *Very true in my case*. An example of an item from the Self-Oriented Perfectionism dimension is *I try to be perfect in everything I do* and from the Socially Prescribed Per-

fectionism dimension is: *There are people in my life who expect me to be perfect*. Items 3,9 and 18 should be rated inversely.

Regarding the psychometric properties of the test (Flett et al., 2016), the internal consistency study was positive with α scores of .85 and .81 for PAO and PSP, respectively. The results in temporal stability were adequate showing coefficients of .74 and .66 for PAO and PSP, respectively. Castro et al. (2004) carried out a Spanish translation of the scale with a clinical and non-clinical sample of women aged between 11 and 19 years. Adequate internal consistency indices were obtained (α = .88 for the PAO dimension; α = .87 for the PSP dimension; and α = .89 for the total scale); as well as good temporal stability (r_{xx} = .83).

Although the original CAPS conceptualizes perfectionism as composed of two dimensions (Flett et al., 2016), subsequent psychometric research has reported alternative solutions, most notably three-factor models distinguishing evaluative and effort-related facets of self-oriented perfectionism. The original two-factor structure has shown acceptable construct validity and good model fit in adolescent samples (e.g., CFI = .91, TLI = .90, RMSEA = .05; McCreary et al., 2004). In Spain, Vicent et al. (2017) conducted a confirmatory factor analysis that supported a three-factor structure (Self-Oriented Perfectionism–Efforts, Self-Oriented Perfectionism–Critical, and Socially Prescribed Perfectionism) with adequate fit indices (CFI = .95; TLI = .94; RMSEA = .04). Nevertheless, as the original two-factor model remains theoretically coherent with the Hewitt and Flett framework and is widely used in the literature, the present study employed this original structure to ensure comparability with previous research while retaining sound psychometric support.

Rosenberg Self-Esteem Scale (EAR)

This scale, developed by Rosenberg (1965), is intended to study the feeling, positive or negative, that a person has of him/herself. The scale is composed of 10 items, half of which refer to negative self-esteem (items 3, 5, 8, 8, 9 and 10) and require to be inverted to obtain the final correction. The items are scored from 1 to 4, being 1 = *Strongly disagree*; 2 = *Disagree*; 3 = *Agree*; 4 = *Strongly agree*, so it is possible to obtain scores between 10 and 40 can be obtained. Regarding the psychometric properties of the EAR, in a study of validation of the scale with Spanish students (Atienza et al., 2000), an adequate reliability coefficient was obtained (α = .86), as well as good indices of temporal stability (r_{xx} = .86 for males and r_{xx} = .64 for females). Evidence supporting construct validity has also been reported, showing satisfactory model fit indices (CFI = .92 for males and CFI = .99 for females).

State-Trait Anxiety Scale

The State-Trait Anxiety Questionnaire provides information on the anxiety levels of the participants from two inde-

pendent points of view: State Anxiety (SA), as a transitory emotional state; or Trait Anxiety (TA), as a propensity or predisposition to experience anxiety in a relatively stable way. It consists of 40 items, 20 of them referring to SA and another 20 associated with TA. The main difference lies in the temporal indication, since, in the case of State Anxiety, the items must be answered taking into account the current state and the moment in which the questionnaire is carried out, while in the case of Trait Anxiety, reference is made to general emotional states that are present most of the time. It is answered through a Likert-type scale with 4 response options, where the values for the Trait Anxiety are 0 = *Almost never*; 1 = *Sometimes*; 2 = *Often*; 3 = *Almost always*; and the values for the State Anxiety are 0 = *not at all*; 1 = *somewhat*; 2 = *moderately so*; 3 = *very much so*. In addition, in each of these subscales there are a number of reversed items (for State Anxiety items 1,2,5,8,10,11,15,16,19 and 20 should be reversed; for Trait Anxiety items 1,6,7,13,15,16 and 19). The total score in each of the subscales can range from 0 to 60 points. Internal consistency studies (Ortuño-Sierra et al., 2016) indicate good levels of reliability (α between .94 and .98) as well as temporal stability (rxx between .81 and .93). The Spanish adaptation of the STAI (Guillén-Riquelme & Buela-Casal, 2011) provides evidence of construct validity based on factorial analyses supporting the expected two-dimensional structure (state and trait anxiety). However, the authors did not report confirmatory fit indices (such as CFI, TLI, or RMSEA) that would allow for a more precise evaluation of model adequacy.

Positive Affect and Negative Affect Scale

The PANAS or Positive and Negative Affect Scale (Watson et al., 1988) measures levels of positive affect and negative affect, each by means of 10 items. The premise consists of asking subjects to rate on a Likert-type scale from 1 to 5 (where 1 = *Not at all or very slightly*; 2 = *A little*; 3 = *Moderately*; 4 = *Quite a lot*; 5 = *A lot*) the extent or degree to which they are experiencing certain emotions, hence it corresponds to a measure of affective state and not of affective trait. Some items corresponding to positive affect are "interested, strong", while negative affect is composed of emotions such as "scared, aggressive". In terms of validity, it has an internal consistency that varies between .86 and .90 for Positive Affect and between .84 and .87 for Negative Affect (Watson et al., 1988). Regarding construct validity, Padrós-Blázquez et al. (2023) reported good evidence of internal structure in a sample of children and adolescents. Their confirmatory factor analysis supported the two-factor model, showing adequate fit indices (CFI = .96, TLI = .95, RMSEA = .06).

Academic achievement

Finally, to collect measures of academic performance, participants were asked to report their average grade in the last trimester.

Data analysis

The results were initially analysed using descriptive statistics and reliability indices based on Cronbach's alpha internal consistency coefficient. In addition, in order to study the relationship between the studied variables, bivariate correlation analysis was used considering Pearson's contingency coefficient. Results with values of $p < .05$ were considered statistically significant.

To resolve questions about the relationship between the two types of perfectionism and academic performance, a direct path model between perfectionism and performance was carried out.

If the results were significant, we proceeded with the inclusion of mediational analyses, in which the paths from perfectionism to achievement were mediated by self-esteem, anxiety and affect. When considering the difference between the two types of perfectionism, as well as the variables of self-esteem, state anxiety, trait anxiety, positive affect, and negative affect separately, 10 models were tested through a series of regression analyses, employing the program Mplus v. 8.9 (Muthén and Muthén, 1998-2017). This is a stepwise regression framework, as proposed by Baron and Kenny (1986) based on the following principles: the direct effect of the predictor on the criterion variable is represented by path (c); furthermore, the mediation effect is the product ($a*b$) of paths (a) (prediction of the outcome by the predictor) and (b) (prediction of the outcome by the mediator). Confidence intervals were also obtained through bootstrapping procedure. To ensure the validity of the results, the assumptions for each specific analysis were verified. For the bivariate correlations, normality and linearity were assessed through visual inspection of the data distribution and statistical tests (e.g., skewness, kurtosis). For the regression models and mediational analyses, assumptions of multicollinearity, linearity, and homoscedasticity were tested.

Results

Descriptive Statistics

Initially, the descriptive statistics of the scales used in the research, together with bivariate correlations, were obtained (See Table 2). These include the mean levels of each scale, the standard deviation and the reliability indexes obtained for each instrument or dimension of the same.

Table 2
Descriptive Statistics

Variables	<i>M</i>	<i>SD</i>	<i>Skew</i>	<i>Kurt</i>	<i>No. items</i>	<i>α</i>
SOP	37.74	8.02	.07	-.51	12	.82
SPP	28.65	7.59	.06	-.31	10	.85
SA	21.16	10.95	.41	-.15	20	.92
TA	24.43	11.28	.29	-.34	20	.91
SE	29.21	5.68	-.18	-.36	10	.86
PA	29.92	7.39	-.11	.12	10	.83
NA	20.16	7.97	.99	.89	10	.89
ACHV	7.10	1.62	-.66	.74		

Note. *M* = Mean; *SD* = Standard Deviation; *Skew* = Skewness; *Kurt* = Kurtosis; α = Cronbach's alpha; SOP = Self-Oriented Perfectionism; SPP = Socially Prescribed Perfectionism; SA = State Anxiety; TA = Trait Anxiety; SE = Self-Esteem; PA = Positive Affect; NA = Negative Affect. ACHV = Achievement.

The central tendency statistics indicate that there are average levels of Self-Oriented Perfectionism and Socially Prescribed Perfectionism in the sample subjects, although a tendency of self-oriented perfectionism towards the upper end can be highlighted in contrast to the other dimension of perfectionism, which tends towards the lower end. In turn, it can be observed that, in general, the subjects in the sample

present tendentially low levels of State Anxiety and Trait Anxiety, as well as moderately high self-esteem. Regarding affect, the mean levels of positive affect are higher than those of negative affect.

At the same time, the reliability indices obtained in this study are given, and they prove to be adequate for all the subscales and factors studied in the different instruments used, in accordance with the idea that "the minimum acceptable value for Cronbach's alpha coefficient is .70, below which the consistency of the scale is low" (Celina & Campo-Arias, 2005, p.577).

The most noteworthy findings obtained by the correlation coefficients among the variables are also described in Table 3. Academic achievement, which is measured through the average grade, exhibited different patterns of correlations with the two types of perfectionism. Regarding perfectionism in its self-oriented domain, it showed a positive and significant correlation with academic performance ($r = .418$), while socially prescribed perfectionism correlated negatively and significantly ($r = -.218$).

Table 3
Bivariate Correlations, Mean and Standard Deviation of the study variables.

Variables	1	2	3	4	5	6	7	8	<i>M</i>	<i>SD</i>
1. ACHV	1								7.100	1.619
2. SOP	.418**	1							37.74	8.024
3. SPP	-.218**	.102	1						28.65	7.590
4. SA	-.215**	.156*	.205**	1					21.16	10.947
5. TA	-.209**	.138*	.218**	.817**	1				24.43	11.277
6. SE	.261**	-.047	-.229**	-.688**	-.752**	1			29.21	5.684
7. PA	.172**	.026	-.104	-.404**	-.404**	.544**	1		29.92	7.390
8. NA	-.124	.146*	.225**	.601**	.592**	-.453**	-.001	1	20.16	7.974

Note. ACHV = Achievement; SOP = Self-Oriented Perfectionism; SPP = Socially Prescribed Perfectionism; SA = State Anxiety; TA = Trait Anxiety; SE = Self-Esteem; PA = Positive Affect; NA = Negative Affect.

* $p \leq .05$; ** $p \leq .01$.

Significant and positive correlations were also obtained between the academic achievement and other study variables, being stronger the relationship with the variable Self-Esteem, than with the variable Positive Affect. On the other hand, academic achievement correlated significantly and negatively with State Anxiety and with Trait Anxiety. Other significant and positive correlations were also found, such as the relationship between Self-Oriented Perfectionism and State Anxiety, Trait Anxiety and Negative Affect; the relationship between Socially Prescribed Perfectionism and State Anxiety, Trait Anxiety and Negative Affect; and negatively with Self-Esteem.

Mediation Analysis

The mediating effects were studied through a series of regression analyses. For the elaboration and interpretation of the mediation analyses, the criteria proposed by Baron and Kenny (1986) were followed, according to which: 1) There must be a relationship between the predictor variable and the

dependent variable; 2) The independent variable must affect the mediator, so there must be a relationship between the two, and finally, 3) The mediator must affect the dependent variable. If these assumptions are fulfilled, it is possible to observe the mediation effect, which may be total, when the relationship between the independent variable and the dependent variable ceases to be significant when the mediator variable comes into play; or partial, when the relationship between the predictor and the dependent variable is reduced with the effect of the mediator. In this study, regression analyses assessed whether the relationship between Self-Oriented Perfectionism and Socially Prescribed Perfectionism with academic performance was mediated by the variables State Anxiety, Trait Anxiety, Self-Esteem, Positive Affect, and Negative Affect.

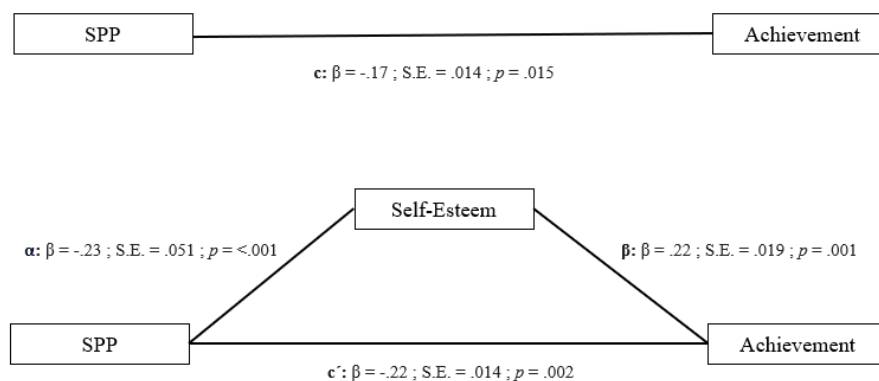
The results of the mediational analysis of self-esteem on the relationship between Socially Prescribed Perfectionism and Performance offer significant data (See Figure 1). PSP is a good predictor of Performance, as it can be observed that the direct effect between Socially Prescribed Perfectionism

and academic performance has been found to be significant ($\beta = -.171$; $S.E. = .015$, $t(199) = -2.41$, $p = .017$) and the negative sign of the coefficient indicates the direction of the relationship, so that the higher the level of this type of perfectionism, the lower the Performance (c). PSP also adequately predicts the level of Self-Esteem in a negative way, so that it is also found a significant link between those two factors ($\beta = -.23$; $S.E. = .052$, $t(200) = -3.32$, $p = .001$) (α). In addition, Self-Esteem is also presented as a good predictor of academic performance ($\beta = .223$, $SE = .020$, $t(199) = 3.21$, $p = .002$) (path β), and the existence of an indirect ef-

fect of this mediator is observed ($\beta = -.051$; $S.E. = .005$; 95% CI $[-.0200, -.0017]$, $z = -2.32$, $p = .020$). This indirect effect reflects a small effect size according to Cohen's (1988) criteria ($\beta = -.051$), suggesting that Self-Esteem partially mediates the relationship between Socially Prescribed Perfectionism and academic performance. Because the direct effect of PSP on achievement is significant ($\beta = -.1670$), there is partial mediation. The overall model was statistically significant, $F(2, 199) = 10.4$, $p < .001$, with $R^2 = .0944$, indicating that the predictors explained approximately 9.4% of the variance in academic performance.

Figure 1

Mediation analysis of Self-Esteem on SPP and Achievement.



Note. c = direct effect of Socially Prescribed Perfectionism on Achievement; α = effect of Socially Prescribed Perfectionism on Self-esteem; β = effect of Self-esteem on Achievement; c' = total effect of both variables on Achievement.

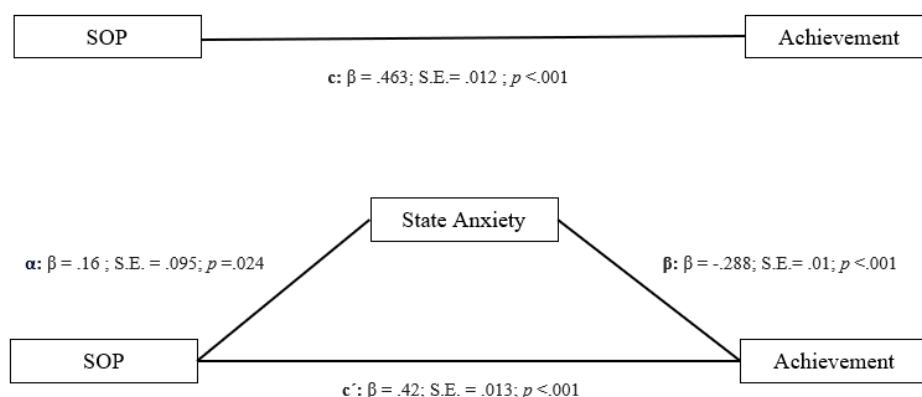
Taking into consideration State Anxiety as a possible mediator between Perfectionism and academic performance, the regression analyses applied offer significant results for the case of SOP (See Figure 2). This dimension of perfectionism was found to be significantly and positively associated with academic achievement ($\beta = .463$; $S.E. = .013$, $t(199) = 7.49$, $p < .001$) (c) and with State Anxiety ($\beta = .157$; $S.E. = .095$, $t(200) = 2.24$, $p = .024$) (α). In turn, this type of anxiety adequately predicts the level of performance, and, as can be seen with the negative sign of the coefficient, the direction of this prediction is negative ($\beta = -.288$; $S.E. = .010$, $t(199) = -4.65$, $p < .001$) (β). The indirect effect also reaches the level of statistical significance ($\beta = -.045$; $S.E. = .004$, 95% CI $[-.0179, -.0003]$, $z = -2.03$, $p = .042$), so we can assume the existence of a mediating effect, which is partial since the direct effect of Self-Oriented Perfectionism on Performance is significant. The findings provide evidence supporting the idea that anxiety plays a mediating role in the relationship between perfectionism and achievement, but only with respect to state anxiety. According to Cohen's (1988) criteria, this indirect effect reflects a small effect size ($\beta = -.045$), supporting the practical relevance of this mediational path even if the effect is not large in magnitude. The full model including both SOP and State Anxiety as predictors was statistically significant, $F(2, 199) = 34.2$, $p < .001$, with an explained variance of $R^2 = .256$, suggesting that approxi-

mately 25.6% of the variance in academic performance was explained by the model.

On the other hand, concerning Socially Prescribed Perfectionism, it is observed that, although the regression analyses indicate that this type of perfectionism is a predictor of Performance ($\beta = -.181$; $S.E. = .015$; $p = .009$) and of State Anxiety ($\beta = .205$; $S.E. = .099$; $p = .003$), which adequately predicts Performance ($\beta = -.178$; $S.E. = .010$; $p = .010$), the indirect effects of State Anxiety on the PSP-Performance relationship ($\beta = -.036$; $S.E. = .004$; $p = .051$) do not reach the level of statistical significance and, therefore, there is no mediating effect. However, it is important to highlight that there is a total effect of both variables (PSP and State Anxiety) on Performance ($\beta = -.218$; $S.E. = .015$; $p = .002$).

The same situation occurs in the case of Trait Anxiety, which has no mediating effect on the relationship SPP - Performance nor on the relationship SOP - Performance. The indirect effects are not significant, being $\beta = -.0369$; $S.E. = .004$; $p = .053$ and $\beta = -.038$; $S.E. = .004$; $p = .070$, respectively. Total effects do exist in both cases.

The results further showed that there is no mediation effect or an indirect effect of Self-Oriented Perfectionism on the academic achievement through Positive Affect ($\beta = .004$; $S.E. = .002$; $p = .717$). However, there is a total effect of the two factors on academic performance ($\beta = .418$; $S.E. = .013$; $p < .001$).

Figure 2*Mediation analysis of State Anxiety on SOP and Achievement.*

Note. c =direct effect of Self-Oriented Perfectionism on Achievement; α =effect of Self-Oriented Perfectionism on State Anxiety; β =effect of State Anxiety on Achievement; c' =total effect of both variables on Achievement.

In the mediation analysis with Negative Affect, it can be observed that the mediating variable does predict Performance but there is no indirect effect of the predictor variable Self-Oriented Perfectionism on the dependent variable Performance through Negative Affect ($\beta = -.027$; $S.E. = .003$; $p = 0.087$). Likewise, these results can be found when studying whether Self-Esteem mediates between SOP and Performance and Positive Affect as a mediator of the relationship between PSP and Performance. It appears that one of our hypotheses, which proposed affect as a mediating variable in the relationship between perfectionism and academic performance, was not supported by the data.

Finally, it has been proved that Negative Affect does not adequately predict Performance and there is no indirect effect on the relationship between PSP and Performance ($\beta = -.018$; $S.E. = .003$; $p = .287$). Thus, there is no mediating effect.

Discussion

Adolescence is a stage in which many contexts interact and shape the "self" of each person. One of those contexts in which adolescents must learn to live and develop is school, where they discover many opportunities for development, but also challenges and obligations. One such duty is achieving a level of performance by the end of the school year that allows them to advance to the next educational stage. Many factors influence student performance, among them the pedagogical strategies of teachers (Gess-Newsome et al., 2017), the socio-cultural environment (Liem et al., 2012), the learning processes and the personal characteristics of the student, particularly personality traits. A key personality disposition in academic life is perfectionism.

The present study contributes to the debate on the role of perfectionism in adolescence and how it manifests in behaviors, beliefs, and attitudes in the academic context. In line with Hassan et al. (2012), our participants reported

higher levels of SOP compared to SPP. This tendency is noteworthy, as it suggests that adolescents may internalize achievement standards primarily as self-imposed goals rather than external expectations. Nevertheless, the predominance of SOP over SPP should not be interpreted uncritically, as both dimensions may entail distinct adaptive and maladaptive consequences. Thus, distinguishing between SOP and SPP is essential but not sufficient; a critical examination of their potential costs and benefits is required, particularly during adolescence, a stage in which self-concept and socio-emotional development are still in formation. In response to the first objective, our findings confirm that perfectionism exerts differential effects on academic performance depending on its dimension. Specifically, SOP showed a positive association with achievement, whereas SPP was negatively related. This pattern supports Hypothesis 1 and aligns with a considerable body of research emphasizing the adaptive role of self-oriented perfectionism (Gaudreau & Thompson, 2010; Madigan, 2019; Osenk et al., 2020; Stoeber, 2012). However, although SOP is positively related to performance in this research, literature does not always report consistent findings. Some studies suggest that SOP may be beneficial only in specific contexts—such as when perfectionism is accompanied by social support or autonomous motivation (Gnilka et al., 2019)—but it can also entail emotional costs, including anxiety or stress, particularly in highly competitive environments (Chen et al., 2024). This highlights the need to interpret the advantages of SOP cautiously and in light of contextual and developmental factors. In contrast, the negative association between SPP and performance provides evidence for its maladaptive role. While previous literature has often reported inconsistent findings regarding SPP (Stoeber, 2012), the present study aligns with research highlighting its detrimental academic implications (Verner-Filion & Gaudreau, 2010; Negru-Subtirica et al., 2022). This discrepancy in the literature may reflect methodological differences, such as cross-sectional versus longitudinal designs, or

contextual variations in cultural and educational expectations. In our sample, the salience of external pressures and fear of failure could explain why SPP undermines achievement, consistent with motivational models that link it to avoidance-driven goals (Verner-Filion & Gaudreau, 2010). Taken together, these findings suggest that while SOP appears to foster academic success, its benefits may coexist with heightened anxiety and pressure, whereas SPP consistently signals risk for poorer outcomes. This duality underscores the need for a more differentiated understanding of perfectionism, moving beyond a simplistic adaptive-maladaptive dichotomy to consider how contextual and developmental factors may amplify or buffer its effects.

The research also provides answers to the second and third objectives, since it is observed that perfectionism is not the only factor influencing student performance. Our results show that academic outcomes improve when students report higher levels of self-esteem and positive emotions (confirming Hypothesis 3 and 8), which is consistent with findings by Akuezilo et al. (2022) and Wu et al. (2020). However, the present study adds to this evidence by showing that these socio-emotional resources may not act in isolation, but rather as protective factors that mitigate the detrimental impact of maladaptive perfectionism. In particular, the mediation analysis confirmed Hypothesis 4, showing that self-esteem partly explains the negative association between SPP and academic performance. This pattern aligns with Chai et al. (2020), who also found that students with higher SPP tend to exhibit lower self-esteem. In our data, concern about mistakes, perceived social pressure, and avoidance of failure—core features of SPP—appear to erode students' self-worth, undermining their sense of competence and consequently reducing achievement.

This mediating mechanism provides a more nuanced explanation of why SPP is consistently linked to poorer academic outcomes, while at the same time highlighting the potential of self-esteem and positive affect to serve as buffers. Rather than conceptualizing these variables as mere correlates of performance, our findings suggest that they may operate as key pathways through which perfectionism exerts its effects. From a practical standpoint, this underscores the importance of strengthening students' self-esteem and promoting positive emotional experiences in order to reduce the negative impact of socially prescribed demands on performance. In this way, the current study extends prior research by integrating both the direct and indirect roles of socio-emotional factors in shaping academic achievement.

At the same time, our results indicate that emotional variables do not all operate in the same direction. Consistent with Colunga-Rodríguez et al. (2021) and Vitasari et al. (2010), both state and trait anxiety correlated negatively with academic outcomes in our sample. However, SOP showed a more complex pattern: SOP was positively associated with achievement, but also positively associated with state anxiety, according to Hypothesis 5. Mediation analyses clarified this complexity by showing that state anxiety partially mediates

the relationship between SOP and performance. In other words, SOP exerts a direct positive effect on grades (presumably through increased striving and effort), while simultaneously increasing state anxiety, which in turn suppresses achievement to some degree — so the beneficial effect of SOP on performance is partially attenuated by its tendency to elevate momentary anxiety, which explains and confirms Hypothesis 6 regarding state anxiety. This pattern helps reconcile apparently contradictory findings in the literature that link SOP with both higher achievement and higher anxiety (e.g., Mills & Blankstein, 2000; Egan et al., 2013). The results are also compatible with the Yerkes–Dodson framework (Yerkes & Dodson, 1908) and more recent empirical work (Morosanova et al., 2019): moderate arousal generated by SOP may be motivating and facilitate performance, but when arousal manifests as excessive state anxiety it impairs working memory and coping, producing performance decrements. Thus, SOP can be adaptive insofar as it mobilizes goal-directed effort, yet maladaptive to the extent that it pushes students beyond an optimal arousal threshold. An additional consideration is the distinction between state and trait anxiety. While trait anxiety reflects a relatively stable predisposition that can undermine learning and academic engagement over time, state anxiety is more situational and directly linked to specific evaluative contexts. Our findings suggest that it is particularly state anxiety that explains the attenuation of SOP's benefits for achievement, underscoring the need to differentiate between these two constructs when analyzing their impact on performance.

Finally, beyond the specific mediational mechanisms identified, the remaining models showed that trait anxiety, positive affect, and negative affect did not act as mediators in the relationship between perfectionism and performance, which does not confirm Hypothesis 9. Nevertheless, their significant total effects suggest that these emotional variables, in interaction with both SOP and SPP, still play a relevant role in shaping academic outcomes. This finding reinforces the idea that perfectionism cannot be examined in isolation: its influence on achievement emerges within a broader network of emotional and motivational factors. Consequently, interventions should adopt a comprehensive approach that not only addresses perfectionistic tendencies but also strengthens protective resources while reducing vulnerability factors.

Theoretical and Practical Implications

The findings support the socio-emotional network model of perfectionism, showing that SOP and SPP influence academic outcomes through distinct pathways involving self-esteem, state anxiety, and affect. These results extend prior conceptualizations (Stoeber et al., 2014; Tobias, 1984) by clarifying the direct and indirect effects of adaptive and maladaptive perfectionism, emphasizing the integration of self-evaluative processes, momentary anxiety, and affective experiences in explaining adolescent achievement.

Practically, addressing perfectionism in schools is crucial to support mental health, as maladaptive perfectionism is linked to anxiety, depression, and suicidal ideation (Fernández-García et al., 2022). Effective interventions include educating students about adaptive and maladaptive traits, promoting realistic goal setting, encouraging reflection on mistakes, focusing on learning rather than outcomes, fostering positive family communication, supporting self-esteem and resilience, and providing strategies for emotional regulation and stress management. Research shows that targeting perfectionism can improve adolescents' mental health and academic motivation (Osenk et al., 2023). Implementing these practices helps schools create supportive environments that reduce perfectionism's negative effects and promote overall well-being.

Limitations and Future Research

This study presents several limitations that should be considered. First, the relatively small and non-random sample limits the generalizability of the findings and may increase the risk of statistical errors. In addition, cross-sectional design prevents firm conclusions about causality in the proposed mediating mechanisms. To address these issues, future research should include larger, more diverse samples and adopt longitudinal or experimental designs, which would allow for stronger causal inferences.

Another methodological limitation concerns the use of observed rather than latent variables. While consistent with the study's objectives, this approach restricts the evaluation of construct validity and reliability. Future studies could incorporate advanced techniques, such as structural equation modelling, to estimate latent variables and apply additional validity checks. Similarly, demographic factors like gender or school grade were not analyzed; however, future research could explore whether these variables moderate the rela-

tionships between perfectionism, socio-affective factors, and academic achievement, providing a more nuanced understanding of the phenomenon.

Moreover, the study was conducted within a specific cultural and educational context, so extending analyses to other contexts and across different developmental stages could clarify whether the observed associations are universal or context-dependent. Despite these limitations, this research is among the first to examine socio-affective variables as mediators in the perfectionism–achievement relationship, thereby expanding knowledge about the personal and interpersonal factors influencing student learning and performance.

Finally, future studies should continue exploring the link between perfectionism and achievement from a motivational perspective. In particular, examining students' academic values, performance expectations, and goal orientations could shed light on the underlying processes of academic behavior and inform interventions designed to foster healthier forms of perfectionism and more adaptive learning approaches.

Complementary information

Conflict of interest: The authors declare no conflict of interest.

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References

- Akuezuilo, J. A., Mbachu, C. U., & Akunne, L. I. (2022). Academic interest and self-esteem as correlates of secondary school students' academic achievement in English language in Nigeria. *Advances in Research*, 23(3), 13–22. <http://dx.doi.org/10.9734/air/2022/v23i330332>
- Atienza, F. L., Moreno, Y., & Balaguer, I. (2000). An Analysis of the Dimensionality of the Rosenberg Self-Esteem Scale in a sample of Valencian Adolescents. *Revista de Psicología. Universitas Tarraconensis*, 22(1–2), 29–42.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest*, 4(1), 1–44. <https://doi.org/10.1111/1529-1006.01431>
- Bleidorn, W., Arslan, R. C., Denissen, J. J. A., Rentfrow, P. J., Gebauer, J. E., Potter, J., & Gosling, S. D. (2016). Age and gender differences in self-esteem—A cross-cultural window. *Journal of Personality and Social Psychology*, 111(3), 396–410. <https://doi.org/10.1037/pspp0000078>
- Castro, J., Gila, A., Gual, P., Lahortiga, F., Saura, B., & Toro, J. (2004). Perfectionism dimensions in children and adolescents with anorexia nervosa. *The Journal of Adolescent Health: Official Publication of the Society for Adolescent Medicine*, 35(5), 392–398. <https://doi.org/10.1016/j.jadohealth.2003.11.094>
- Celina, O. H., Fang & Campo-Arias, A. (2005). Aproximación al uso del coeficiente Alfa de Cronbach [An Approach to the Use of Cronbach's Alfa]. *Revista Colombiana de Psiquiatría*, 24 (4), 572–580.
- Chai, L., Yang, W., Zhang, J., Chen, S., Hennessy, D. A., & Liu, Y. (2020). Relationship between perfectionism and depression among Chinese college students with self-esteem as a mediator. *Omega: Journal of Death & Dying*, 80(3), 490–503. <https://doi.org/10.1177/0030222819849746>
- Chen, S., Saklofske, D. H., Flett, G. L., & Hewitt, P. L. (2024). Assessing and evaluating the perfectionism social disconnection model: social support, loneliness, and distress among undergraduate, law, and medical students. *Journal of Psychoeducational Assessment*, 42(6), 743–767. <https://doi.org/10.1177/07342829241244951>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Colunga-Rodríguez, C., Ángel-González, M., Vázquez-Colunga, J. C., Vázquez-Juárez, C. L., & Colunga-Rodríguez, B. A. (2021). Relación entre

- ansiedad y rendimiento académico en alumnado de secundaria [Relationship between anxiety and academic performance among secondary school students]. *Revista de Estudios e Investigación en Psicología y Educación*, 8(2), 229-241. <https://doi.org/10.17979/reipe.2021.8.2.8457>
- Damian, L. E., Stoeber, J., Negru, O., & Băban, A. (2014). Positive and negative affect in adolescents: An investigation of the 2x2 model of perfectionism. *Cognition, Brain, Behavior: An Interdisciplinary Journal*, 18(1), 1-16.
- Doyle, I., & Catling, J. C. (2022). The influence of perfectionism, self-esteem and resilience on young people's mental health. *The Journal of Psychology*, 156(3), 224-240. <https://doi.org/10.1080/00223980.2022.2027854>
- Egan, S. J., Watson, H. J., & Kane, R. T. (2013). Anxiety as a mediator between perfectionism and eating disorders. *Cognitive Therapy and Research*, 37(5), 905-913. <http://dx.doi.org/10.1007/s10608-012-9516-x>
- Endleman, S., Brittain, H., & Vaillancourt, T. (2021). The longitudinal associations between perfectionism and academic achievement across adolescence. *International Journal of Behavioral Development*, 46(2). <https://doi.org/10.1177/01650254211037400>
- Essau, C. A., Leung, P. W., Conradt, J., Cheng, H., & Wong, T. (2008). Anxiety symptoms in Chinese and German adolescents: their relationship with early learning experiences, perfectionism, and learning motivation. *Depression and Anxiety*, 25(9), 801-810. <https://doi.org/10.1002/da.20334>
- Fang, T., & Liu, F. (2022). A review of perfectionism. *Open Journal of Social Sciences*, 10(1), 355-364. <https://doi.org/10.4236/jss.2022.101027>
- Fekih-Romdhane, F., Sawma, T., Obeid, S., & Hallit, S. (2023). Self-critical perfectionism mediates the relationship between self-esteem and satisfaction with life in Lebanese university students. *BMC Psychology*, 11(1), 4. <https://doi.org/10.1186/s40359-023-01040-6>
- Fernández-García, O., Gil-Llario, M. D., Castro-Calvo, J., Morell-Mengual, V., Ballester-Arnal, R., & Estruch-García, V. (2022). Academic perfectionism, psychological well-being, and suicidal ideation in college students. *International journal of environmental research and public health*, 20(1), 85. <https://doi.org/10.3390/ijerph20010085>
- Flett, G. L., & Hewitt, P. L. (2002). Perfectionism and maladjustment: An overview of theoretical, definition, and treatment issues. In G. L. Flett & P. L. Hewitt (Eds.), *Perfectionism: Theory, research, and treatment* (pp. 5-31). American Psychological Association. <https://doi.org/10.1037/10458-001>
- Flett, G. L., & Hewitt, P. L. (2006). Positive Versus Negative Perfectionism in Psychopathology: A Comment on Slade and Owens's Dual Process Model. *Behavior Modification*, 30(4), 472-495. <https://doi.org/10.1177/0145445506288026>
- Flett, G. L., & Hewitt, P. L. (2022). *Perfectionism in childhood and adolescence: A developmental approach*. American Psychological Association. <https://doi.org/10.1037/0000289-000>
- Flett, G. L., Nepon, T., & Hewitt, P. L. (2016). Perfectionism, worry, and rumination in health and mental health: A review and a conceptual framework for a cognitive theory of perfectionism. In F. M. Sirois & D. S. Molnar (Eds.), *Perfectionism, health, and well-being* (pp. 121-155). Springer International Publishing/Springer Nature. https://doi.org/10.1007/978-3-319-18582-8_6
- Gaudreau, P., & Thompson, A. (2010). Testing a 2 × 2 model of dispositional perfectionism. *Personality and Individual Differences*, 48(5), 532-537. <https://doi.org/10.1016/j.paid.2009.11.031>
- Gess-Newsome, J., Taylor, J. A., Carlson, J., Gardner, A. L., Wilson, C. D., & Stuhlsatz, M. A. M. (2017). Teacher pedagogical content knowledge, practice, and student achievement. *International Journal of Science Education* 41 (7), 944-963. <https://doi.org/10.1080/09500693.2016.1265158>
- Gnilka, P. B., Broda, M. D., & Spit for Science Working Group 2018 (2019). Multidimensional perfectionism, depression, and anxiety: Tests of a social support mediation model. *Personality and Individual Differences*, 139, 295-300. <https://doi.org/10.1016/j.paid.2018.11.031>
- Goulet-Pelletier, J. C., Beaudin, M. F., & Cousineau, D. (2025). Investigating the negative link between perfectionism and emotional divergent thinking. *Discover Psychology*, 5(1), 9. <https://doi.org/10.1007/s44202-025-00330-x>
- Guillén Riquelme, A., & Buela Casal, G. (2011). Actualización psicométrica y funcionamiento diferencial de los ítems en el State Trait Anxiety Inventory (STAI) [Psychometric update and differential item functioning in the State Trait Anxiety Inventory (STAI)]. *Psicothema*, 23(3), 510-515.
- Hamachek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology: A Journal of Human Behavior*, 15(1), 27-33.
- Hassan, H. K., Abd-El-Fattah, S. M., Abd-El-Maugoud, M. K., & Badary, A. H. A. (2012). Perfectionism and performance expectations at university: Does gender still matter? *European Journal of Education and Psychology*, 5(2), 133-147. <https://doi.org/10.30552/ejep.v5i2.86>
- Hawkins, S., & Mackinnon, S. P. (2025). Does perfectionism moderate the relationship between postsecondary student stress and academic self-efficacy, self-concept, and burnout? *Canadian Journal of Behavioural Science / Revue canadienne des sciences du comportement*. Advance online publication. <https://doi.org/10.1037/cbs0000466>
- Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, 60(3), 456-470. <https://doi.org/10.1037/0022-3514.60.3.456>
- Hewitt, P. L., Caelian, C. F., Flett, G. L., Sherry, S. B., Collins, L., & Flynn, C. A. (2002). Perfectionism in children: Associations with depression, anxiety, and anger. *Personality and Individual Differences*, 32, 1049-1061. [https://doi.org/10.1016/S0191-8869\(01\)00109-X](https://doi.org/10.1016/S0191-8869(01)00109-X)
- Kirkcaldy, B., Furnham, A., & Siefen, G. (2004). The relationship between health efficacy, educational attainment and well-being among 30 nations. *European Psychologist*, 9(2), 107-119. <https://doi.org/10.1027/1016-9040.9.2.107>
- Kuusi, A., Tuominen, H., Widlund, A., Korhonen, J., & Niemivirta, M. (2024). Lower secondary students' perfectionistic profiles: Stability, transitions, and connections with well-being. *Learning and Individual Differences*, 110, 102419. <https://doi.org/10.1016/j.lindif.2024.102419>
- Lecours, V., Plante, I., & Chaffee, K. E. (2025). Understanding the contrasting relations between perfectionism, school achievement, and internalising behaviours: The mediating role of test anxiety. *Educational Psychology*, 1-23. <https://doi.org/10.1080/01443410.2025.2549855>
- Liem, G., Martin, A. J., Porter, A. L., & Colmar, S. (2012). Sociocultural antecedents of academic motivation and achievement: Role of values and achievement motives in achievement goals and academic performance. *Asian Journal of Social Psychology*, 15, 1-13. <https://doi.org/10.1111/j.1467-839X.2011.01351.x>
- Madigan, D. J. (2019). A meta-analysis of perfectionism and academic achievement. *Educational Psychology Review*, 31(4), 967-989. <https://doi.org/10.1007/s10648-019-09484-2>
- McCreary, B. T., Joiner, T. E., Schmidt, N. B., & Ialongo, N. S. (2004). The structure and correlates of perfectionism in African American children. *Journal of Clinical Child & Adolescent Psychology*, 33(2), 313-324. https://doi.org/10.1207/s15374424jccp3302_13
- Mills, J. S., & Blankstein, K. R. (2000). Perfectionism, intrinsic vs. extrinsic motivation, and motivated strategies for learning: A multidimensional analysis of university students. *Personality and Individual Differences*, 29, 1191-1204. [https://doi.org/10.1016/S0191-8869\(00\)00003-9](https://doi.org/10.1016/S0191-8869(00)00003-9)
- Morosanova, V., Fomina, T., & Filippova, E. (2019). The relationship between the conscious self-regulation of schoolchildren's learning activity, their test anxiety level, and the final exam result in mathematics. *Behavioral Sciences*, 10(16), 1-10. <http://dx.doi.org/10.3390/bs10010016>
- Muthén, L. K., & Muthén, B. O. (1998-2017). *Mplus User's Guide. Eight Edition*. Muthén & Muthén.
- Negru-Subtirica, O., Damian, L. E., Pop, E. I., & Crocetti, E. (2022). The complex story of educational identity in adolescence: Longitudinal relations with academic achievement and perfectionism. *Journal of Personality*, 91(2), 299-313. <https://doi.org/10.1111/jopy.12720>
- Ortuño-Sierra, J., García-Velasco, L., Inchausti, F., Debbané, M., & Fonseca-Pedro, E. (2016). Nuevas aproximaciones en el estudio de las propiedades psicométricas del STAI [New approaches on the study of the psychometric properties of the STAI]. *Actas Españolas de Psiquiatría*, 44(3), 83-92.
- Osenk, I., Johnson, C., & Wade, T. D. (2023). A Pragmatic Randomized Controlled Trial Targeting Perfectionism in Young Adolescents. *School Mental Health*, 15(1), 151-164. <https://doi.org/10.1007/s12310-022-09540-3>
- Osenk, I., Williamson, P., & Wade, T. D. (2020). Does perfectionism or pursuit of excellence contribute to successful learning? A meta-analytic

- review. *Psychological Assessment*, 32(10), 972-983. <https://doi.org/10.1037/pas0000942>
- Padrós-Blázquez, F., Reynoso González, O. U., & Martínez-Medina, M. P. (2023). Psychometric study of the Positive and Negative Affect Scales for Children and Adolescents (PANAS-C) in Mexican population. *CES Psicología*, 16(3). <https://doi.org/10.21615/cesp.6974>
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.
- Seong, H., & Chang, E. (2021). Profiles of perfectionism, achievement emotions, and academic burnout in South Korean adolescents: Testing the 2 × 2 model of perfectionism. *Learning and Individual Differences*, 90, 102045. <https://doi.org/10.1016/j.lindif.2021.102045>
- Soest, T., Wichstrom, L., & Kvaem, I. L. (2016). The developmental of global and domain-specific self-esteem from age 13 to 31. *Journal of Personality and Social Psychology*, 110(4), 592-608. <https://doi.org/10.1037/pspp0000060>
- Spielberger, C. D. (1972). Anxiety as an Emotional State. In C. D. Spielberger (Ed.), *Anxiety: current trends in theory and research* (Vol. 1, pp. 23-49). New York: Academic Press. <http://dx.doi.org/10.1016/B978-0-12-657401-2.50009-5>
- Stoeber, J. (2012). Perfectionism and performance. In S. M. Murphy (Ed.), *The Oxford handbook of sport and performance psychology* (pp. 294-306). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199731763.013.0015>
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review*, 10(4), 295-319. https://doi.org/10.1207/s15327957pspr1004_2
- Stoeber, J., Schneider, N., Hussain, R., & Matthews, K. (2014). Perfectionism and negative affect after repeated failure: Anxiety, depression, and anger. *Journal of Individual Differences*, 35(2), 87-94. <https://psycnet.apa.org/doi/10.1027/1614-0001/a000130>
- Stricker, J., Schneider, M., & Preckel, F. (2019). School satisfaction differentially predicts multidimensional perfectionism one year later. *Personality and Individual Differences*, 143, 30-35. <https://doi.org/10.1016/j.paid.2019.02.014>
- Tobias, S. (1984, April 23-27). *Test anxiety: Cognitive interference or inadequate preparation?* [Conference paper]. Annual Meeting of the American Educational Research Association, New Orleans, LA, United States. <https://eric.ed.gov/?id=ED249260>
- Vacca, M., Balleisio, A., & Lombardo, C. (2020). The relationship between perfectionism and eating-related symptoms in adolescents: A systematic review. *European Eating Disorders Review*, 29(1), 32-51. <https://doi.org/10.1002/erv.2793>
- Verner-Filion, J., & Gaudreau, P. (2010). From perfectionism to academic adjustment: The mediating role of achievement goals. *Personality and Individual Differences*, 49(3), 181-186. <https://doi.org/10.1016/j.paid.2010.03.029>
- Vicent, M. (2017). *Estudio del perfeccionismo y su relación con variables psicoeducativas en la infancia tardía [Study of perfectionism and its relationship with psychoeducational variables in late childhood]* [Tesis doctoral, Universidad de Alicante]. Repositorio Institucional de la Universidad de Alicante. <http://hdl.handle.net/10045/73818>
- Vitasari, P., Abdul-Wahab, M. N., Othman, A., Herawan, T., & Sinnadurai, S. K. (2010). The relationship between study anxiety and academic performance among Engineering Students. *Procedia Social and Behavioral Sciences*, 8, 490-497. <https://doi.org/10.1016/j.sbspro.2010.12.067>
- Watson, D., Clark, L., & Tellegen, A. (1988). Development and validation of Brief Measures of Positive and Negative Affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070. <http://dx.doi.org/10.1037/0022-3514.54.6.1063>
- Wu, X., Gai, X., & Wang, W. (2020). Subjective well-being and academic performance among middle schoolers: A two-wave longitudinal study. *Journal of Adolescence*, 84, 11-22. <https://doi.org/10.1016/j.adolescence.2020.07.011>
- Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, 18, 459-482.
- Zhao, M., Li, J., Lin, Y., Zhang, B., & Shi, Y. (2022). The effect of perfectionism on test anxiety and the mediating role of sense of coherence in adolescent students. *Journal of Affective Disorders*, 310, 142-149. <https://doi.org/10.1016/j.jad.2022.05.009>