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Psychological and Contextual Predictors of School Attendance Problems (SAPs)

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ABSTRACT

Background: Regular school attendance represents a central indicator of students' educational and psychosocial functioning. School Attendance Problems (SAPs), defined by Havik (2015) as a heterogeneous set of difficulties due to somatic symptoms, subjective health complaints, truancy and school refusal, represent a significant educational challenge. SAPs represent the outcome of a complex interplay of psychological, social, and motivational factors that compromise school participation, with negative academic and psychosocial outcomes.
Method: This study, conducted on a sample of 539 high school students, aims to investigate the association between the different reasons underlying SAPs and individual factors, such as learned helplessness (LH), mastery orientation (MO), perfectionism, and procrastination, as well as the perception of the school climate.
Results: Correlational analyses indicate that LH and procrastination are associated with greater levels of non-attendance, while MO and positive perceptions of the school climate are correlated with lower levels of SAPs. Linear regressions, instead, show that LH and procrastination are significantly associated with subjective health complaints and school refusal related reasons, while procrastination alone is related to truancy absences. The affirming diversity dimension of the school climate is significatively associated with school refusal, suggesting a possible link conditioned by individual vulnerabilities.
Conclusions: The results support a multifactorial view of SAPs, highlighting the central role of individual vulnerabilities and school context. The findings underline the need for interventions that integrate individual strategies and school initiatives aimed at promoting an inclusive and supportive climate.

Keywords: School attendance problems; motivation; procrastination; school climate; perfectionism

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Introduction

Regular school attendance represents a central indicator of students' educational functioning and psychosocial well-being. Continuous participation in school activities is not only essential for the acquisition of cognitive and curricular competencies but also represents a critical condition for the development of motivation, social skills and adaptive functioning within the school context (Finn et al., 1989; Sorrenti et al., 2024). Within this framework, *School Attendance Problems* (SAPs), an umbrella construct that encompasses different manifestations of negative behaviors or persistent difficulties of a student to attend or stay in school, have emerged as a prominent area of psychological research (Pérez-Marco et al., 2024). SAPs include various forms of absence, withdrawal or avoidance, each differing in etiology, behavioral expression and psychological underpinning, yet all converging in their potential to influence the continuity of students' educational trajectories (Havik et al., 2015; Heyne et al., 2019; Larsen et al., 2022). The complexity of SAPs has prompted the development of theoretical models to assess reasons for school non-attendance. Among these, the model developed by Havik et al. (2015) identifies four key categories of reasons underlying students' school absenteeism: Somatic reasons, Subjective Health Complaints reasons, Truancy reasons, and School Refusal reasons. Somatic Symptoms refer to physical health conditions, such as chronic illnesses, acute medical issues, or injuries, that directly impede students' capacity to attend school. Subjective Health Complaints Reasons concern students' self-perceived health status, including psychological and psychosomatic symptoms which, although not always medically diagnosed, can substantially affect their school participation. Beyond health-related explanations, absenteeism may arise from Truancy reasons and School Refusal Reasons. Truancy reasons involve unauthorized or unjustified absence from school without parental permission, typically associated with a lack of interest in academic activities, peer pressure to not attend school, or involvement in other activities during school hours. In contrast, school refusal reasons (SR) emerge when students are reluctant to attend school, due to traumatic experiences in the school context, fear of failure, and anxious conditions such as separation anxiety and social anxiety.

In line with Havik et al. (2015), school attendance problems should be understood as the result of the interaction with individual, familiar, scholastic and broader social factors. Rather than reflecting merely students' physical presence in the classroom, SAPs represent a complex interplay of psychological, social, and motivational processes that can profoundly shape students' developmental and educational trajectories.

Among the psychological factors, motivational variables, perfectionism and procrastination tendencies, each contributing, in different ways, to patterns of avoidance and disengagement. Previous literature showed the association between school success and motivational factors

(Linnenbrink & Pintrich,2002; Sorrenti et al., 2015), such as Learned helplessness (LH) and Mastery Orientation (MO). LH, conceptualized by Seligman (1975), describes the belief that one cannot exert control over the outcomes of one's actions, a cognitive pattern that is often associated with depressive symptoms, reduced motivation, and poor performance (Sorrenti et al., 2024). In educational settings, it emerges when students perceive failures as inevitable and attribute them to internal, stable, and uncontrollable causes, leading to a sense of personal inefficacy that undermines motivation and promotes avoidance behaviors (Weiner, 1986). This cognitive pattern contrasts with MO, in which students view tasks as manageable challenges aimed at learning, investing effort and strategies to improve their competencies (Sorrenti et al., 2018). Perfectionism, a psychological construct characterized by the motivation to pursue excellence (Kamushadze *et al.*, 2021), represents another crucial dimension in understanding SAPs. Hewitt and Flett (1991) identified three distinct dimensions of perfectionism: self-oriented perfectionism, which reflects the imposition of unrealistic standards upon oneself; other-oriented perfectionism, which entails holding excessively high expectations of others; and socially prescribed perfectionism, characterized by the pervasive belief that external agents impose unattainable demands upon the individual. Self-oriented perfectionism can stimulate effort but also foster performance anxiety and procrastination, whereas socially prescribed perfectionism, based on perceived unrealistic external expectations, is associated with school refusal and avoidance behaviors (Flett & Hewitt, 2002, 2014; Kearney, 2008; Ingul et al., 2012; Pérez-Marco et al., 2025). Procrastination, defined as the tendency to intentionally delay tasks despite being aware of potential negative consequences, constitutes a significant risk factor for school disengagement (Steel, 2007). It functions as an emotional avoidance strategy aimed at reducing anxiety, fear of failure, and insecurity, but in the long term, it exacerbates stress, feelings of inadequacy, and motivational decline (Tice & Baumeister, 1997; Sirois & Pychyl, 2013).

Contextual factors, particularly the school climate, also play a central role in students' educational outcomes. A positive school climate, characterized by supportive teacher–student relationships, positive peer interactions, a sense of belonging, and clear and consistent rules, fosters academic and interpersonal competence and promotes regular school attendance (Aldridge & Ala'i, 2013; Daily et al., 2020; Hamlin, 2021). Conversely, a school environment characterized by weak relationships between students and teachers, unclear behavioral expectations, organizational rigidity and limited support can contribute significantly to school absenteeism (Kearney, 2008; Sorrenti et al., 2024).

Present Study

School attendance problems (SAPs) are conceptualized as a multidimensional concept that encompasses various forms of school absenteeism. Within this framework, Havik et al. (2015)

propose a model according to which different SAPs can be associated with four distinct motivations (somatic symptoms, subjective health complaints, truancy reason, and school refusal reason), reflecting students' attempts to cope with school challenges. Moreover, previous literature converges in identifying SAPs as the outcome of dynamic interactions between individual psychological vulnerabilities and contextual school factors (Havik et al., 2015; Heyne et al., 2019; Thambirajah et al., 2008).

Considering that School Attendance Problems cannot be fully understood through a single individual or environmental aspect, the present study aims to investigate the associations between the underlying motivations for SAPs (somatic symptoms, subjective health complaints, truancy reason, and school refusal reason), as defined in the model by Havik et al. (2015), individual variables (learned helplessness, mastery orientation, perfectionism, and academic procrastination), and the different dimensions of school climate (Teacher Support, Peer Connection, School Connectedness, Affirming Diversity, Rule Clarity, Reporting and Seeking Help). Specifically, it is hypothesized that risk factors, such as learned helplessness, academic procrastination, perfectionism, and a school environment perceived as unsupportive or non-inclusive, will be positively associated with school attendance problems' reasons. In contrast, protective factors, such as mastery orientation and a supportive and inclusive school climate, are expected to be negatively associated with all four motivations. Furthermore, the study aims to examine whether these individual and contextual variables are significantly linked with the different motivations underlying SAPs. It is expected that LH, procrastination, perfectionism, and the perception of an overly rigid or insufficiently supportive school environment, one in which students feel poorly connected to their school context, will emerge as significantly related to school non-attendance reasons.

Methods

Participants

The study sample consisted of 539 students enrolled in the second, third, and fourth years of Italian upper secondary schools. The participants' mean age was 16.05 years (SD = 0.99), with a distribution reflecting the mid-adolescent range, which is considered particularly critical for the onset of SAPs. As regards gender, the sample comprised 304 females (56.4%), 222 males (41.2%) and 13 students that chose to not specify gender (2.4%).

The average number of days of school absence is 23.11 per year (SD = 11.83), which, compared to the approximately 200 days of lessons provided for by the Italian school system, corresponds to about 11.5% of the total, highlighting the significant prevalence of this phenomenon.

Regarding academic achievement, the average grade recorded for the previous year was 7.40 (SD = 0.909). In the Italian grading system, where the minimum passing mark is set at 6/10, this implies that approximately 80% of students attained a score above the minimum requirement.

Procedure and Measure

Data were collected from October 2023 to May 2024 through an online survey using Google Form. After obtaining ethical approval and schools' availability, participants started to be recruited. Students were selected from the second, third, and fourth grades across different study tracks. These grade levels were chosen to focus on a critical developmental period, characterized by increased vulnerability risk of SAPs and school dropout. Participants were informed of the project's aims and given the opportunity to participate voluntarily and anonymously. However, only students who gave their personal consent, if they were of age, or who obtained the informed consent from their parents or legal tutor, if they were minors, were included in the research. The students completed the questionnaires in a single session during school hours. The research method guaranteed the anonymity of answers and avoided the possibility of receiving incomplete protocols because the online answer inserting did not allow for progress if a response was left unanswered. This study was performed following the recommendations of the Ethical Code of the Italian Association of Psychology (AIP) and the Declaration of Helsinki (20139. The study is the result of a project funded by the Erasmus+ Program of the European Union (Grant number: 2022-1-ES01-KA220-SCH-000088733), and the protocol was approved by the University of Alicante [UA-2023-06-29-4].

A demographic questionnaire was used to collect participants' basic demographic information while, to assess the variables under study, different psychological instruments were administered.

The *Adolescent Reasons for School Non-Attendance Scale* (ARNSA; Havik et al., 2015) was used to assess students' motives for school non-attendance. It comprises 17 items rated on a 5-point Likert scale (1= not at all true, 5 = very true). The scale includes four subscales assessing: Somatic Symptoms, Subjective Health Complaints, Truancy related reasons, and School Refusal related reasons. In this study, the various subscales show internal reliability values ranging from acceptable to good, with a good overall index (α= .80). Specifically, the Somatic Symptoms and Truancy reason subscales showed an acceptable level of internal consistency (α=.67 and α= .69) while the Subjective Health Complaints and School Refusal reason subscales demonstrate a good reliability (α= .73 and α= .80).

The *Child-Adolescent Perfectionism Scale* (CAPS; Flett et al., 2016) was used to evaluate students' tendency to perfectionism. The instrument is composed of 22 items rated on a 5-point Likert scale (1=strongly disagree, 5=strongly agree) and allows to measure self-oriented (SOP) and socially

prescribed (SPP) perfectionism. Both subscales show a very good internal reliability (respectively α= .84 and α= .82), with an overall high alpha value (α= .86)

The *What's Happening in This School?* (WHITS; Aldridge & Ala, 2013), was used to assess students' perceptions of school climate. The instrument is composed of 49 items rated on a 5-point Likert scale (1 = almost never, 5 = almost always), comprising six subscales measuring: Teacher Support, Peer connectedness, School Connectedness, Affirming Diversity, Rule Clarity, and Reporting and seeking help. The instrument showed a high overall internal consistency (α= .96), indicating strong consistency and stability among all items. Specifically, all subscales demonstrate high value of internal reliability: Teacher Support (α= .90); Peer Connectedness (α= .89); School Connectedness (α= .90); Affirming Diversity (α= .89); Rule Clarity (α= .90); Reporting and Seeking Help (α= .91)

Academic procrastination was measured using *the Academic Procrastination Scale* (APS; McCloskey, 2011), which comprises 5 items on a 5-point Likert scale (1 = not at all true, 5 = very true) with higher scores indicating a general tendency to postpone school tasks. The APS has been widely used in educational research to investigate the antecedents and consequences of academic procrastination among adolescents. In this study, the scale shows a very good internal reliability (α= .84).

Finally, the *Learned Helplessness Questionnaire* (LHQ; Quinless & Nelson, 1988; Sorrenti et al., 2015) includes 13 items rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) and consists of two subscales: Learned Helplessness (LH) which assesses students' perceived lack of control over academic outcomes, and Mastery Orientation (MO), which evaluates their perceived competence and proactive engagement in learning tasks. The MO scale (α= .78) shows good reliability, while LH (α= .83) demonstrates higher internal consistency. The overall coefficient (α= .70) indicates moderate reliability across the combined subdimensions.

Statistics and data analysis

Data analyses were performed using Jamovi 2.6.26 (The Jamovi Project, 2024). Descriptive statistics were conducted to summarize the main characteristics of the sample. To explore the relationships among the variables under study, correlations were conducted between academic achievement, the different motivations underlying school absenteeism (somatic symptoms, subjective health complaints, truancy, and school refusal), motivational orientations and behaviors (MO and LH), academic procrastination, perfectionism (self-oriented and socially prescribed), and school climate dimensions (teacher support, peer connectedness, school connectedness, affirming diversity, rule clarity, and reporting and seeking help). Moreover, to reach a deeper understanding of how these variables contribute to School Attendance Problems (SAPs), linear regression analyses were

performed. This statistical approach makes it possible to assess the predictive effect of one or more independent variables on a dependent variable, estimating the unique contribution of each predictor within an overall model. Unlike simple bivariate correlations, regression allows for the identification of factors that retain a significant role even when other variables are considered simultaneously. Moreover, regression analysis provides estimates of the variance explained by the full model, offering an indication of the combined predictive power of the variables examined.

Results

Correlations

The results of correlational analysis (Table 1) highlight the significant relationships between all variables under study.

In particular, academic average is negatively associated with academic procrastination (r = -0.282), learned helplessness (r = -0.085) and all reasons of school non-attendance: somatic symptoms (r = -0.144), subjective health complaints (r = -0.277), truancy (r = -0.210), and school refusal (r = -0.116), while shows positive associations with mastery orientation (r = 0.356), self-oriented perfectionism (r = 0.216), and all dimensions of school climate: teacher support (r = 0.114), peer connection (r = 0.096), school connectedness (r = 0.213), affirming diversity (r = 0.257), rule clarity (r = 0.174), and reporting/seeking help (r = 0.152).

Somatic symptoms is positively correlated with academic procrastination (r = 0.149) and negatively correlated with teacher support (r = -0.109), school connectedness (r = -0.123) and reporting/seeking help (r = -0.103). Subjective health complaints is positively associated with learned helplessness (r = 0.168), academic procrastination (r = 0.234) and socially prescribed perfectionism (r = 0.098) and negatively associated with mastery orientation (r = -0.098), teacher support (r = -0.121), school connectedness (r = -0.122), affirming diversity (r = -0.095), rule clarity (r = -0.105), and reporting/seeking help (r = -0.092). Truancy results positively correlated with learned helplessness (r = 0.088) and academic procrastination (r = 0.419), and negatively correlated with mastery orientation (r = -0.274), self-oriented perfectionism (r = -0.127), teacher support (r = -0.161), school connectedness (r = -0.187), affirming diversity (r = -0.131), rule clarity (r = -0.191), and reporting/seeking help (r = -0.120). School refusal is positively associated with learned helplessness (r = 0.365) and academic procrastination (r = 0.358) and socially prescribed perfectionism (r = 0.143), and negatively associated with mastery orientation (r = -0.174), teacher support (r = -0.254), peer connection (r = -0.165), school connectedness (r = -0.276), rule clarity (r = -0.215), and reporting/seeking help (r = -0.178).

Mastery Orientation shows a negative association with academic procrastination (r = -0.426), and positive associations with self-oriented perfectionism (r = 0.357), teacher support (r = 0.309), peer connection (r = 0.317), school connectedness (r = 0.413), affirming diversity (r = 0.378), rule clarity (r = 0.390), and reporting/seeking help (r = 0.346). Learned helplessness, instead is positively correlated with academic procrastination (r = 0.287), self-oriented perfectionism (r = 0.184) and socially prescribed perfectionism (r = 0.268) and negatively correlated with teacher support (r = -0.129), peer connection (r = -0.166), and school connectedness (r = -0.208).

Academic procrastination is positively associated with socially prescribed perfectionism (r = 0.085) and negatively associated with self-oriented perfectionism (r = -0.103), and all dimensions of school climate: teacher support (r = -0.277), peer connection (r = -0.114), school connectedness (r = -0.272), affirming diversity (r = -0.140), rule clarity (r = -0.256), and reporting/seeking help (r = -0.176).

Self-oriented perfectionism is positively associated with peer connection (r = 0.131), school connectedness (r = 0.180), affirming diversity (r = 0.186), rule clarity (r = 0.129), and reporting/seeking help (r = 0.142).

Overall, correlations highlight that adaptive motivational and social factors are associated with better academic outcomes and lower psychosocial difficulties, whereas dysfunctional factors are linked to poorer academic performance and higher health-related complaints.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Academic Average	—															
2. Somatic Symptoms	-0.144***	—														
3. Subjective Health Complaints	-0.277***	0.495***	—													
4. Truancy reason	-0.210***	0.180***	0.398***	—												
5. School Refusal reason	-0.116**	0.260***	0.472***	0.391***	—											
6. Mastery Orientation	0.356***	-0.073	-0.098*	-0.274***	-0.174**	—										
7. Learned Helplessness	-0.085*	0.048	0.168***	0.088*	0.365***	-0.131**	—									
8. Academic Procrastination	-0.282***	0.149***	0.234***	0.419***	0.358***	-0.426***	0.287***	—								
9. Self-Oriented Perfectionism	0.216***	0.026	0.022	-0.127**	-0.004	0.357***	0.184***	-0.103*	—							
10. Socially Prescribed Perfectionism	0.069	0.054	0.098*	0.037	0.143***	0.079	0.268***	0.085*	0.409***	—						
11. Teacher Support	0.114**	-0.109*	-0.121**	-0.161***	-0.254***	0.309***	-0.129**	-0.277***	0.077	-0.062	—					
12. Peer Connection	0.096*	-0.065	-0.068	-0.076	-0.165***	0.317***	-0.166***	-0.114**	0.131**	-0.015	0.360***	—				
13. School Connectedness	0.213***	-0.123**	-0.122**	-0.187***	-0.276***	0.413***	-0.208***	-0.272***	0.180***	-0.031	0.590***	0.666***	—			
14. Affirming Diversity	0.257***	-0.057	-0.095*	-0.131**	-0.083	0.378***	0.031	-0.140**	0.186***	0.049	0.371***	0.393***	0.488***	—		
15. Rule Clarity	0.174***	-0.073	-0.105*	-0.191***	-0.215***	0.390***	-0.045	-0.256***	0.129**	0.013	0.485***	0.354***	0.560***	0.553***	—	
16. Reporting and Seeking Help	0.152***	-0.103*	-0.092*	-0.120**	-0.178***	0.346***	-0.070	-0.176***	0.142***	-0.048	0.533***	0.408***	0.571***	0.498***	0.655***	—

Table 1. Correlation matrix (N=539). **Note**. *p<.05, **p<.01, ***p<.001.

Regression Analysis

A series of linear regression analyses (Table 2) were conducted to assess the contribution of individual factors (MO, LH, academic procrastination, self-oriented and socially prescribed perfectionism) and school climate dimensions (teacher support, peer connection, school connectedness, affirming diversity, rule clarify and reporting/seeking help) in predicting reasons for school non-attendance (somatic symptoms, subjective health complaints, truancy-related reasons and school refusal-related reasons). Individual factors and school environment dimensions were entered as independent variables, while reasons of school non-attendance were entered as dependent variables.

Multicollinearity among predictors was assessed using the Variance Inflation Factor (VIF). All variables have VIF values between 1.27 and 3.23, well below the commonly indicated critical threshold (VIF $\geq$ 10). Tolerances are all greater than .30. Overall, there is no evidence of multicollinearity that would compromise the interpretation of the regression coefficients.

First, the model examining school non-attendance related to subjective health complaints was significant, F (11, 527) = 4.79, $p < .001$, $R^2 = .09$. Specifically, it was positively predicted by learned helplessness, t (527) = 1.987, $\beta = .092$, $p = .047$, and academic procrastination, t (527) = 4.376, $\beta = .210$, $p < .001$.

Similarly, the regression model focusing on school non-attendance due to truancy reason was significant, F (11, 527) = 11.50, $p < .001$, $R^2 = .19$. Within this dimension, academic procrastination emerged as a strong and significant positive predictor, t (527) = 7.836, $\beta = .362$, $p < .001$.

Finally, the analysis of school refusal-related reasons also yielded a significant model, F (11, 527) = 15.90, $p < .001$, $R^2 = .25$. In this case, learned helplessness proved to be a significant positive predictor, t (527) = 5.511, $\beta = .234$, $p < .001$, as academic procrastination, t (527) = 5.408, $\beta = .241$, $p < .001$. Moreover, affirming diversity, a dimension of school climate, was found to positively predict school refusal-related absenteeism, t (527) = 2.225, $\beta = .110$, $p = .027$.

Dependent Variable	*Predictors*	*β*	*t*	*p*
Subjective Health Complaints	Learned Helplessness	.092	1.987	.047
	Academic Procrastination	.210	4.376	≤.001
Truancy Reason	Academic Procrastination	.362	7.836	≤.001
School Refusal	Learned Helplessness	.234	5.511	≤.001
	Academic Procrastination	.241	5.408	≤.001
	Affirming Diversity	.110	2.225	.027

Table 2. Linear Regression Analysis (N=539).

Note. *p<.05, **p<.01, ***p<.001; β represents standardized coefficients. Only statistically significant relations are reported.

Discussions

The present study examined the individual and contextual factors associated with school non-attendance reasons, with particular attention to the interplay between motivational variables, perfectionism, academic procrastination, and perceptions of school climate. Overall, the findings provide a coherent and multifaceted picture of the mechanisms underlying SAPs, confirming the relevance of both personal vulnerabilities and environmental conditions highlighted in previous literature (Havik et al., 2015; Kearney, 2008; Ingul et al., 2013).

Consistent with our hypotheses, Learned Helplessness (LH) results significantly and positively associated with all school non-attendance reasons. This result aligns with previous literature, suggesting that maladaptive motivational patterns, linked to a greater fear of failure, foster disengagement from school contexts (Seligman, 1975; Ferrari et al., 1995; Kearney, 2008). LH results particularly related to school refusal absenteeism, consistent with research linking helplessness to internalizing symptoms, avoidance behaviors and withdrawal from academic situations (Cicchetti & Rogosch, 2002; Cheung & Pomerantz, 2011).

On the contrary, mastery orientation (MO) does not show a direct association with SAPs reasons in the regression models, but the overall findings suggest that it may represent a motivational resource. Higher levels of MO seem to be linked to better academic performance, more positive perceptions of the school climate, and lower levels of academic procrastination and school non-attendance reasons, in line with previous studies (Roorda et al., 2011; Aldridge et al., 2016).

Similarly to LH, academic procrastination results positively associated with all school non-attendance reasons, particularly with truancy and school refusal reasons. The accumulation of unfinished tasks or perceived academic failure may increase situational pressure, motivating students to avoid school as an immediate, maladaptive, coping strategy, in line with models of school disengagement that describe an escalation from chronic task avoidance to school withdrawal or truancy (Finn, 1993; Ferrari et al., 2005; Balfanz et al., 2007; Keppens & Spruyt, 2017).

Perfectionism, instead, showed a different pattern. Socially prescribed perfectionism results positively associated with subjective health complaints and school refusal reasons, consistent with its well-documented links to stress, psychological distress, and maladjustment (Flett & Hewitt, 2002; Flett et al., 2016; Pérez-Marco et al., 2025). However, this dimension does not maintain a significant association in the regression models, suggesting that the influence of socially prescribed perfectionism on school non-attendance reasons may be predominantly indirect, operating through motivational variables, such as learned helplessness and academic procrastination (Ingul et al., 2012; Pérez-Marco et al., 2025). In contrast, self-oriented perfectionism shows an adaptive profile, being

positively correlated with mastery orientation, higher academic performance and more favorable perceptions of the school climate. This divergence aligns with contemporary perspectives that distinguish between maladaptive and adaptive expressions of perfectionism in educational settings (Neumeister, 2004; Damian et al., 2017).

School climate was also expected to be associated with SAPs. The findings partially support this expectation: teacher support, peer connection, rule clarity, school connectedness, and affirming diversity were negatively associated with most school non-attendance reasons, consistent with evidence linking positive school climates to student well-being, engagement, and resilience (Cohen et al., 2009; Roorda et al., 2011; Aldridge et al., 2016). Regression analyses revealed a more nuanced pattern. Among the climate dimensions, only affirming diversity was significantly associated with school refusal-related absenteeism, and in a positive direction. This result should be interpreted with caution given the cross-sectional design and exploratory nature of the study. However, it aligns with prior research suggesting that the effects of environmental resources may vary depending on students' individual characteristics (O'Connor & McCartney, 2007; Reeve, 2006; Harold & Sellers, 2018; Ingul et al., 2019), suggesting, in this sense, that affirming diversity may represent a "conditional resource," beneficial for many, but not universally protective in the presence of strong individual vulnerabilities.

Limit of the research and future prospective

Despite the valuable insights provided by the present study, several limitations should be acknowledged. First, the research adopted a cross-sectional design, which allows for the identification of significant associations among variables but does not permit causal inferences. Longitudinal studies are therefore essential to clarify the directionality and potential bidirectionality of the emerged associations. Another limitation concerns the exclusive reliance on self-report measures, susceptible to a range of subjective biases, including social desirability tendencies and difficulties in accurately recognizing or reporting one's emotional states. Future research would benefit from the integration of multi-informant and multi-method approaches, such as school attendance records, teacher observations, or clinical assessments, to provide a more comprehensive understanding of attendance difficulties. Moreover, although the sample was relatively large and diverse, it was drawn from a specific cultural and geographical context, which may constrain the generalizability of the findings. Cultural, socioeconomic, and institutional factors may shape students' experiences of perfectionism, school climate, and attendance-related behaviors. Cross-cultural comparative studies would therefore be valuable for assessing the stability of the observed associations and adapting intervention strategies to diverse educational contexts. Moreover, it is also important to note that the regression models, while statistically significant, accounted for only a modest proportion of the variance in the different

forms of SAPs. This suggests that additional variables not included in the present study may play a meaningful role. Future research should consider examining other factors, such as parental involvement, educational consistency, experiences of peer victimization, and individual differences in emotional regulation, all of which may contribute substantially to attendance difficulties.

Despite these limitations, the findings of this study offer valuable insights into the nature of School Attendance Problems (SAPs), and provide important implications for educational practice, highlighting the need for multilevel intervention strategies.

Conclusions

In conclusion, this study contributes to the growing body of research highlighting the complex interplay between psychological and contextual factors in school attendance problems (SAPs). LH and academic procrastination emerged as significant predictors across multiple SAP dimensions, underscoring the central role of motivational and cognitive vulnerabilities. At the same time, the unexpected predictive role of diversity-affirming practices suggests that school climate can interact with individual characteristics in nuanced and sometimes unanticipated ways.

The implications for prevention and intervention are noteworthy. At the individual level, strategies aimed at modifying dysfunctional attributional styles and supporting the development of self-regulation and coping skills are essential (Kearney & Albano, 2004; King et al., 1998). Interventions specifically targeting procrastination, such as cognitive-behavioral strategies, time-management training, and motivational enhancement techniques, and mindfulness trainings, may be particularly relevant, given its strong predictive role across different types of SAPs (Ferrari et al., 1995; Sorrenti et al., 2025). At the school level, fostering a supportive relational and motivational climate is crucial. Research consistently highlights that teacher support, peer connectedness, and clear, fair rules enhance engagement and reduce the risk of dropout (Finn, 1989; Aldridge et al., 2016; Ekstrand, 2015; Sorrenti et al., 2024). Diversity-affirming practices should be implemented carefully to promote belonging without imposing unintended pressure on vulnerable students. These strategies are consistent with multi-tiered, systemic frameworks that combine universal and targeted support to encourage consistent attendance (Kearney & Graczyk, 2014; Maynard et al., 2012). Collectively, these findings highlight the importance of a comprehensive, systemic approach capable of addressing individual, and school-level factors in the prevention of school absenteeism.

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Declaration of Interests Statement

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data availability

The dataset analyzed during the current study are available from the corresponding author on reasonable request.

Ethics approval

All procedures performed in studies involving human participants were in accordance with the recommendations of the Ethical Code of the Italian Association of Psychology (AIP) and all subjects were given written informed consent in accordance with the Declaration of Helsinki (2013). The protocol was approved by the University of Alicante [UA-2023-06-29-4]. This article does not contain any studies with animals performed by any of the authors.

Author's Contribution

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Carmelo Francesco Meduri, Maria Imbesi and Luana Sorrenti. The first draft of the manuscript was written by Carmelo Francesco Meduri and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript tualization,

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