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Understanding school refusal behavior in adolescence: Risk profiles and attributional style for academic results

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A B S T R A C T

Adolescents who show a tendency to refuse school could also be experiencing poor motivation towards learning. The present work aimed to identify profiles of adolescents with school refusal behavior (SRB) and to examine whether these possible groups differed in academic self-attributions. Participants were 1183 Spanish students (53.7% girls) from 14 to 17 years old ($M = 15.58$, $SD = 1.08$). They answered to the Spanish versions of the *School Refusal Assessment Scale-Revised* (SRAS-R) and the *Sydney Attribution Scale* (SAS). Four SRB profiles were found by the Latent Profile Analysis technique: non-SRB, moderately high SRB, anxious SRB, and high SRB. Statistically significant differences were identified among the four groups in all the academic self-attributions examined. The anxious and high SRB profiles showed a greater tendency to attribute their academic failures to ability, while they tended to attribute their successes less to internal causes. Intervention strategies are suggested to attend these risk SRB profiles.

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Comprendiendo el comportamiento de rechazo escolar en la adolescencia: perfiles de riesgo y estilo atribucional ante los resultados académicos

R E S U M E N

Los adolescentes que muestran una tendencia a rechazar la escuela podrían estar experimentando también una baja motivación hacia el aprendizaje. El presente trabajo tiene como objetivo identificar perfiles de adolescentes con comportamiento de rechazo escolar (CRE) y examinar si estos posibles grupos difieren en autoatribuciones académicas. Participan 1183 estudiantes españoles (53.7% chicas) de 14 a 17 años ($M = 15.58$, $DT = 1.08$). Responden a las versiones españolas de la *School Refusal Assessment Scale-Revised* (SRAS-R) y la *Sydney Attribution Scale* (SAS). Se hallan cuatro perfiles de CRE mediante la técnica de *Latent Profile Analysis*: no-CRE, CRE moderadamente alto, CRE ansioso y CRE alto. Se identifican diferencias estadísticamente significativas entre los cuatro grupos en todas las autoatribuciones académicas examinadas. Los perfiles CRE ansioso y alto muestran una mayor tendencia a atribuir sus fracasos académicos a la capacidad, mientras que tienden a atribuir menos sus éxitos a causas internas. Se sugieren estrategias de intervención para atender estos perfiles de CRE de riesgo.

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Introduction

Educational research is focusing increasingly on school maladjustment to explain the reasons why adolescents with school refusal behavior (SRB) tend to drop out of high school (e.g., Choe, 2021; Gan & Guo, 2022; García-Fernández et al., 2016). Students with SRB are those that show persistent difficulties in attending school or remaining there during a school day and these difficulties may or may not be based on anxiety (Hendron & Kearney, 2011). Anxious learners feel intense fear when anticipating perceived dangers (Méndez et al., 2008; Signorini, 2019). SRB is especially worrying in Spain, since the 20.2% of boys and the 11.6% of girls aged 18–24 did not finish compulsory secondary education in 2020 and

were not receiving any formal or non-formal education (Statistics National Institute, Spain, 2021). According to these educational indicators for 2020, the percentage for Spanish boys was the highest in comparison with European Union countries and the rate for Spanish girls was only surpassed by Romania (16.6%), Malta (13.9%), and Bulgaria (12.1%). Therefore, more research on SRB among Spanish adolescents is needed to prevent early dropout from compulsory secondary education and its negative consequences, such as juvenile delinquency (Kethineni et al., 2021), substance use or sexual intercourse (Graves et al., 2020).

Emotional problems and SRB have been widely studied in the Spanish adolescent population (e.g., Fernández-Sogorb et al., 2022; Gonzálvez, Díaz-Herrero, Vicent et al., 2020). Nevertheless, little is known about the co-occurrence of poor motivation towards learning and SRB in this population (Gil et al., 2019), even when the decrease in academic motivation throughout the high school years can lead adolescents to poor school adjustment (Jiang et al., 2018). In this sense, academic self-attributions are considered one of the most influential factors in motivation towards learning (Holmes & Hwang, 2016). These self-attributions are understood as students' perceptions about the reasons why they obtain academic results of success and failure (Barros & Simão, 2018) and are included in Weiner's attributional theory (Weiner, 1985). This motivational model tries to elucidate the way in which the causes used to explain academic results influence students' behavior in future school situations (Graham & Taylor, 2016). Thus, it is of great interest to examine the association between SRB and academic self-attributions to improve the teaching-learning process of adolescents who could be showing demotivation to attend school and poor motivation towards learning.

School refusal behavior in adolescence

Students who manifest SRB are not a homogeneous population. Each person can justify non-attendance by referring to several causes simultaneously (Kearney & Sheldon, 2017) and causes' relative strength is different according to the situation (Kearney, 2019). In this sense, Kearney and Silverman (1993) developed a functional model that includes four possible reasons for the maintenance of SRB. On the one hand, the first two explanatory factors refer to the ongoing SRB due to negative reinforcement (e.g., avoiding doing oral and written exams or speaking in public). Specifically, these factors are the following: (1) *Avoidance of school-based stimuli that provoke a sense of general Negative Affectivity* (ANA) and (2) *Escape from aversive Social and/or Evaluative situations at school* (ESE). On the other hand, the last two explanatory factors refer to the ongoing SRB due to positive reinforcement (e.g., wanting to remain with parents or to stay home playing video games). The third and fourth factors are the following: (3) *Pursuit of Attention from Significant others* (PAS) and (4) *Pursuit of Tangible Reinforcements outside of school* (PTR).

The above-mentioned explanatory factors of SRB can be assessed by the School Refusal Assessment Scale (SRAS; Kearney & Silverman, 1993). The revised version of this scale (SRAS-R; Kearney, 2002) is commonly used to detect different subpopulations or profiles of adolescents with SRB, since it offers the possibility of adapting interventions to the reasons that justify such behavior in each group of students. Eight studies have been found in which SRB profiles in adolescence were identified. Authors recruited samples with an age range of 12–18 years old. Except for two works with Latin American students (Gonzálvez, Inglés, Vicent et al., 2020; Gonzálvez, Kearney et al., 2018), all of them were conducted in the Spanish population (Delgado et al., 2019; Giménez-Miralles, Gonzálvez, Sanmartín et al., 2021; Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019, 2020; Gonzálvez, Díaz-Herrero, Vicent et al., 2019, 2020). In respect of the profile

solutions, these works coincide in finding a group characterized by low levels of ANA, ESE, PAS, and PTR, which has been predominantly called non-SRB. Five in eight studies identified a mixed profile with high levels of explanatory factors based on both negative reinforcement (ANA and ESE) and positive reinforcement (PAS) (Giménez-Miralles, Gonzálvez, Sanmartín et al., 2021; Gonzálvez, Díaz-Herrero, Sanmartín et al., 2020; Gonzálvez, Díaz-Herrero, Vicent et al., 2019; Gonzálvez, Inglés, Vicent et al., 2020; Gonzálvez, Kearney et al., 2018). The mixed profile has been named anxious SRB, since previous studies found that school refusers whose causes of the ongoing SRB are the first three SRAS-R dimensions tended to show high levels of anxious symptoms (e.g., Fernández-Sogorb et al., 2018; Gonzálvez, Inglés et al., 2018; Gonzálvez, Inglés, Fernández-Sogorb et al., 2020). Therefore, it could be said that their negative attitudes toward high school are based on anxiety (Hendron & Kearney, 2011). Four in eight works found a high SRB group (Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019, 2020; Gonzálvez, Díaz-Herrero, Vicent et al., 2020; Gonzálvez, Inglés, Vicent et al., 2020) and a moderately high SRB profile (Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019, 2020; Gonzálvez, Díaz-Herrero, Vicent et al., 2019), who scored high and moderately high in the four explanatory factors examined, respectively. Few studies reported some different groups labeled as moderately low SRB (i.e., moderately low scores in ANA, ESE, PAS, and PTR) (Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019; Gonzálvez, Díaz-Herrero, Vicent et al., 2019, 2020), SRB by Tangible Reinforcements (i.e., high scores in PTR) (Gonzálvez, Inglés, Vicent et al., 2020; Gonzálvez, Kearney et al., 2018), SRB by Negative Reinforcements (i.e., high levels of ANA and ESE) (Delgado et al., 2019; Giménez-Miralles, Gonzálvez, Sanmartín et al., 2021), and SRB by Positive Reinforcements (i.e., high levels of PAS and PTR) (Delgado et al., 2019; Giménez-Miralles, Gonzálvez, Sanmartín et al., 2021; Gonzálvez, Díaz-Herrero, Sanmartín et al., 2020). In sum, the anxious, high, moderately high, and non-SRB profiles constitute the most common SRB profiles in adolescence.

The anxious and high SRB groups are considered risk profiles, because they have proved to be related to low self-concept (Gonzálvez, Díaz-Herrero, Vicent et al., 2019), high levels of psychopathological symptoms such as depression or anxiety (Gonzálvez, Díaz-Herrero, Sanmartín et al., 2020; Gonzálvez, Díaz-Herrero, Vicent et al., 2020; Gonzálvez, Kearney et al., 2018), and family conflicts (Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019). Regarding the academic field, it was found that Spanish adolescents with an anxious SRB profile showed low scores in learning strategies, motivation towards learning being one of the variables examined (Giménez-Miralles, Gonzálvez, Sanmartín et al., 2021). Nevertheless, empirical evidence on the relationship between academic motivation and SRB profiles remains scarce. In this respect, the study of the association between academic self-attributions of failures and successes and SRB groups could be a further step to know whether the kinds of causal self-attributions used by students change according to the profile of SRB and, consequently, whether adolescents' motivation towards learning changes according to the SRB profile manifested.

School refusal behavior and academic self-attributions

Previous research on the attributional style (i.e., the tendency to select certain types of causal explanations for successful and negative events; Metalsky & Abramson, 1981) of students with SRB is based on Weiner's model (Weiner, 1985). Specifically, previous studies analyzed ability, effort, and external causes as task difficulty or luck. It is because, according to the model's basis, they are the main causes to which learners attribute their positive and negative results in academic tasks. Any causal self-attribution can be classified by locus of causality, stability, and controllability. Locus

Table 1
Sample distribution by gender and age

Gender	Age				Total
	14	15	16	17	
Boys (%)	109 (9.2)	168 (14.2)	133 (11.2)	138 (11.7)	548 (46.3)
Girls (%)	121 (10.2)	179 (15.1)	160 (13.6)	175 (14.8)	635 (53.7)
Total (%)	230 (19.4)	347 (29.3)	293 (24.8)	313 (26.5)	1183 (100)

of causality makes reference to whether the cause is internal or external to a person; stability refers to whether the cause varies or persists over time; and the controllability dimension refers to whether a person can alter the cause or not. Depending on the causal dimensions that correspond to an attributional style, greater or lesser realistic expectations about next tasks are manifested by a student and it affects their degree of involvement (see Weiner, 2014, 2018 for a review). For this reason, it is convenient to develop the tendency to use internal, unstable, and controllable causal self-attributions like effort. Thus, learners tend to take charge of their academic success or failure and perceive that it can improve or worsen whether they increase or reduce their efforts (Perry & Hamm, 2017; Stiensmeier-Pelster & Heckhausen, 2018). However, this adaptive attributional style has not been found in students with SRB.

As said before, several studies have examined the association between explanatory factors of SRB based on Kearney and Silverman's functional model (1993) and academic self-attributions based on Weiner's attributional theory (Weiner, 1985). Samples consisted of Spanish children aged 8–11 (Giménez-Miralles, Gonzálvez, & Aparicio-Flores, 2021; Gonzálvez et al., 2021; Gonzálvez, Sanmartín et al., 2018) and Chilean adolescents aged 13–18 (Lagos-San Martín et al., 2014). On the one hand, participants who showed SRB based on negative reinforcement (Giménez-Miralles, Gonzálvez, & Aparicio-Flores, 2021; Gonzálvez, Sanmartín et al., 2018) or both negative and positive reinforcement (specifically, ANA, ESE, and PAS) (Gonzálvez et al., 2021; Lagos-San Martín et al., 2014) tended to attribute their academic failures more to ability and effort. On the other hand, learners whose negative attitudes toward school were based on positive reinforcement were more likely to attribute their academic successes to ability (Gonzálvez, Sanmartín et al., 2018; Lagos-San Martín et al., 2014), to ability and effort (Giménez-Miralles, Gonzálvez, & Aparicio-Flores, 2021) or to ability, effort, and external causes (Gonzálvez et al., 2021). The literature review reveals that no research on this topic has been conducted with Spanish adolescents so far, despite Spain is one of the European countries with the highest rate of undergraduates in compulsory secondary education (Statistics National Institute, Spain, 2021). In this sense, it is necessary to examine whether SRB profiles in the Spanish adolescent population differ in their attributional style for academic results of success and failure.

The study aim was two-fold: (1) to verify the existence of adolescent SRB profiles based on Kearney and Silverman's functional model (1993) in a Spanish community sample; and (2) to analyze the existence of statistically significant differences between the possible adolescent SRB profiles and academic self-attributions based on Weiner's attributional theory (Weiner, 1985). To fulfill the study purpose, two hypotheses were formulated:

Hypothesis 1. Considering the most common SRB profiles that have been previously identified in adolescence (Delgado et al., 2019; Giménez-Miralles, Gonzálvez, Sanmartín et al., 2021; Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019, 2020; Gonzálvez, Díaz-Herrero, Vicent et al., 2019, 2020; Gonzálvez, Inglés, Vicent et al., 2020; Gonzé1vez, Kearney et al., 2018), it was expected to find a four-profiles solution: non-SRB, moderately high SRB, high

SRB, and anxious SRB (characterized by explanatory factors based on negative and positive reinforcement).

Hypothesis 2. Taking as reference the only previous work that analyzed SRB and academic self-attributions in adolescence (Lagos-San Martín et al., 2014), it was expected that students with anxious SRB would show a tendency to attribute their results of failure more internally and their results of success less to internal causes.

Method

Participants

The participants of this research were recruited by random cluster sampling. One or two secondary education centers were randomly chosen in each geographical area of Murcia and Alicante (Spanish provinces). Five geographical areas were considered: center, north, south, east, and west. As a result, 18 private, concerted, and public centers participated in this study. From each secondary education center, four groups were randomly chosen. A total of 1362 adolescents composed the initial sample. Of these participants, 97 (7.1%) were excluded because their parents or legal guardians did not provide written informed consent to take part in the study and 82 (6%) were excluded for not properly completing the self-report measures (e.g., they provided two answers per item). The final sample consisted of 1183 students (53.7% girls) aged 14–17 ($M = 15.58$, $SD = 1.08$). The frequency distribution by gender and age is shown in Table 1. The sample presented a homogeneous distribution by gender and age because no statistically significant differences were identified across gender and age groups, $\chi^2_{(3)} = 1.45$, $p = .70$.

Measures

School Refusal Assessment Scale-Revised (SRAS-R). The SRAS-R (Kearney, 2002) is composed by 24 items organized in four factors that assess motivating conditions of SRB: (1) *Avoidance of school-based stimuli that provoke a sense of general Negative Affectivity* (ANA); (2) *Escape from aversive Social and/or Evaluative situations at school* (ESE); (3) *Pursuit of Attention from Significant others* (PAS); and (4) *Pursuit of Tangible Reinforcements outside of school* (PTR). Its Likert-type response scale consists of 7 points (0 = never, 6 = always). The Spanish version of the SRAS-R (Gonzálvez et al., 2016) was used in this research. It is composed of 18 items but maintains the factorial structure for assessing SRB in children and adolescents. In this study, adequate reliability coefficients were obtained for the four factors through Cronbach's alpha: $\alpha = .81$ (ANA), $\alpha = .80$ (ESE), $\alpha = .80$ (PAS), and $\alpha = .69$ (PTR); McDonald Omega: $\omega = .85$ (ANA), $\omega = .87$ (ESE), $\omega = .86$ (PAS), and $\omega = .74$ (PTR); composite reliability: CR = .85 (ANA), CR = .87 (ESE), CR = .86 (PAS), and CR = .74 (PTR); and average variance extracted: AVE = .52 (ANA), AVE = .58 (ESE), AVE = .44 (PAS), and AVE = .43 (PTR).

Sydney Attribution Scale (SAS). The SAS (Marsh, 1984) is an instrument with 72 items that assess causal self-attributions used by students in hypothetical situations to explain their academic results. Specifically, the scale assesses three possible causes: ability, effort, or external causes, and two academic

results: successes or failures. Each item is responded to on a 5-point Likert scale (1 = false, 5 = true). In this research, the Spanish version of the SAS (González-Pumariega et al., 1996) was administered to the participants and acceptable reliability coefficients were obtained through Cronbach's alpha: α = .83 (*success/ability*), α = .81 (*success/effort*), α = .61 (*success/external causes*), α = .73 (*failure/ability*), α = .63 (*failure/effort*), and α = .56 (*failure/external causes*); McDonald Omega: ω = .86 (*success/ability*), ω = .85 (*success/effort*), ω = .73 (*success/external causes*), ω = .81 (*failure/ability*), ω = .74 (*failure/effort*), and ω = .70 (*failure/external causes*); composite reliability: CR = .86 (*success/ability*), CR = .86 (*success/effort*), CR = .73 (*success/external causes*), CR = .81 (*failure/ability*), CR = .74 (*failure/effort*), and CR = .70 (*failure/external causes*); and average variance extracted: AVE = .35 (*success/ability*), AVE = .34 (*success/effort*), AVE = .20 (*success/external causes*), AVE = .29 (*failure/ability*), AVE = .20 (*failure/effort*), and AVE = .18 (*failure/external causes*).

Procedure

Before testing, the management team of each secondary education center was interviewed to present the purpose of this research and request their collaboration. Written informed consent was also obtained from the students' parents or legal guardians for two weeks. Then, the participants collectively completed the questionnaires in the classroom during the school day. They were informed on the anonymous and voluntary nature of the tests. The average administration time was 20 minutes for the SRAS-R and 30 minutes for the SAS. A researcher was present to explain the completion procedure, clarify doubts, and verify that the participants completed the scales on their own (i.e., without talking to each other). All procedures followed the ethical standards of the 1964 Declaration of Helsinki, and the protocol of this study was approved by the Ethics Committee of the University of Alicante (UA-2017-09-05).

Statistical analyses

Firstly, Pearson's correlation coefficients between the dimensions of the SRAS-R and the SAS were calculated, the effect sizes of statistical significance being interpreted following Cohen (1988): values between .10 and .29, between .30 and .49, and above or equal .50 represent small, moderate, and large effect sizes. The number of SRB profiles was identified using Latent Profile Analysis (LPA). Before performing LPA, the scores obtained in the four factors of the SRAS-R were standardized. The standardized *z* scores were interpreted as follows: *z* scores below -.5 suggested low levels of SRB, between -.5 and .5 indicated moderate levels of SRB, and over .5 showed high levels of SRB (Sanmartín et al., 2018). The best profile solution was selected examining the theoretical interpretability of each model and considering the following fit indeces (Song & Kim, 2019): the lowest values of the Bayesian Information Criteria (BIC) and the Akaike Information Criteria (AIC); the Vuong-Lo-Mendell-Rubin Likelihood-Ratio Test (LRT) and the Bootstrap Likelihood Ratio Test (BLRT) *p*-values below to .05; and entropy scores close to 1. Moreover, each subgroup of participants should contain at least 1% of the sample (Tein et al., 2013).

After identifying the SRB profiles, possible differences among these groups of students in the mean scores of academic self-attributions were examined by a multivariate analysis of variance (MANOVA). The variables met statistical normality and homoscedasticity assumptions. The magnitude of effect by the Eta square index (η^2) was computed. Bonferroni's post-hoc tests were also conducted to detect among which SRB profiles there were statistically significant differences. In addition, effect sizes were obtained calculating the *d*-index, which was interpreted following Cohen (1988): *d*-values between .20 and .49, between .50 and

.79, and above .80 represent small, moderate, and large effect sizes. SPSS version 26 (IBM Corp., 2019) and MPlus version 8 (Muthen & Muthen, 2017) were used for conducting statistical analyses.

Results

Correlations between school refusal behavior and academic self-attributions

Statistically significant correlations with small magnitude were found between all the dimensions of the SRAS-R and the SAS, except for the correlations between PTR and *success/effort* (−.04) and *failure/ability* (.04), which were no significant correlations. Negative significant correlations (*p* < .001) were identified between ANA and *success/ability* (−.19), *success/effort* (−.20), *success/external causes* (−.16), and *failure/external causes* (−.22); between ESE and *success/ability* (−.18), *success/effort* (−.17), *success/external causes* (−.15), and *failure/external causes* (−.19); between PAS and *success/ability* (−.13), *success/effort* (−.10), *success/external causes* (−.12), and *failure/external causes* (−.11); and between PTR and *success/external causes* (−.18) and *failure/external causes* (−.11). On the other hand, positive significant correlations (*p* < .001) were identified between ANA and *failure/ability* (.24) and *failure/effort* (.14); between ESE and *failure/ability* (.22) and *failure/effort* (.12); between PAS and *failure/ability* (.18) and *failure/effort* (.10); and between PTR and *failure/effort* (.12). Finally, positive significant correlations (*p* < .05) were identified between PTR and *success/ability* (.06).

Latent profiles of school refusal behavior

Five models from two to six profiles were tested. Table 2 displays the fit statistics obtained for these latent profile solutions. The five- and six-profile models had the lowest AIC and BIC values, an entropy value close to 1, and *p* < .05 for the BLRT. However, the six-profile model was rejected since its size was 1 (see Table 2) and this value indicates that one profile did not include at least 1% of the sample. The five-profile model was also rejected, but in this case because the LRT *p*-value was not below to .05. Regarding the four-profile model, it had the lowest AIC and BIC values in comparison with two- and three-profile models, an entropy value close to 1, *p* < .05 for both the LRT and the BLRT, and all its groups were representative of the sample. Therefore, this latent profile model was selected to perform the following data analyses.

The four-profile solution was also chosen because of its greater theoretical interpretability in line with previous literature on SRB. Figure 1 shows the standardized means of the SRAS-R factors referred to motivating conditions of SRB (ANA, ESE, PAS, and PTR) for each group of students. The first profile was formed of 549 participants (46.4%) with low levels of AA, ESE, and PAS and moderately low levels of PTR. Therefore, this group was labeled as *non*-SRB. The second profile consisted of 389 participants (32.9%), who reported moderately high levels of all SRAS-R dimensions, so it was named *moderately high* SRB. The third profile included 220 participants (18.6%) characterized by high levels of AA, ESE, and PAS and moderate levels of PTR. This group was called *anxious* SRB considering previous literature. Finally, the fourth profile was called *high* SRB. It classified 25 participants (2.1%) with high levels of all four motivating conditions of SRB examined.

Differences among the latent profiles of school refusal behavior in academic self-attributions

A MANOVA compared the mean scores obtained by the SRB profiles in academic self-attributions. Statistically significant differences were detected among the latent profiles of SRB in all SAS dimensions (Wilks' Lambda = .89, $F_{(18,1179)}$ = 8.04, *p* < .001,

Table 2
Fit statistics for each latent profile model

Model	AIC	BIC	Entropy	LRT	BLRT	Size
2 profiles	12746.05	12812.03	.83	.00	.00	0
3 profiles	12443.83	12535.18	.84	.23	.00	0
4 profiles	12305.01	12421.73	.78	.01	.00	0
5 profiles	12191.87	12333.97	.78	.11	.00	0
6 profiles	12119.64	12287.11	.81	.00	.00	1

Note. AIC = Akaike Information Criteria; BIC = Bayesian Information Criteria; LRT = Vuong-Lo-Mendell-Rubin Likelihood-Ratio Test; BLRT = Bootstrap Likelihood Ratio Test.
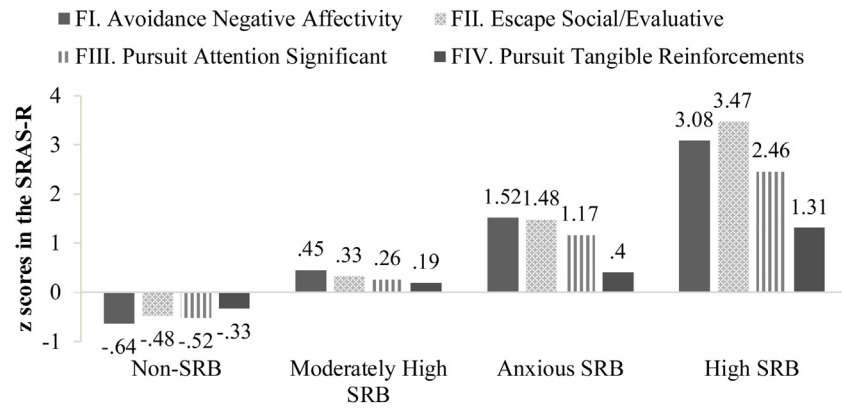

Figure 1. Graphic representation of the school refusal behavior (SRB) profiles through latent profile analysis (LPA).

Table 3
Means and standard deviations obtained by each latent profile in academic self-attributions for success and failure

Variable	Non-SRB		Moderately high SRB		Anxious SRB		High SRB		Statistical significance		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	$F_{(3,1179)}$	*p*	η^2_p
SA	39.81	9.53	37.68	8.38	35.53	8.52	34.12	8.95	14.45	<.001	.04
SE	43.35	8.57	41.48	8.54	38.92	7.59	38.04	8.17	16.50	<.001	.04
SEx	39.27	7.06	37.30	6.42	36.73	6.22	35.00	5.90	12.26	<.001	.03
FA	30.89	8.35	34.29	7.87	35.34	7.34	37.52	7.50	24.80	<.001	.06
FE	34.10	7.02	35.14	6.35	35.95	6.13	39.16	8.61	8.04	<.001	.02
FEx	41.18	6.05	38.93	5.51	38.50	6.17	37.08	7.27	17.60	<.001	.04

Note. SA = *success/ability*; SE = *success/effort*; SEx = *success/external causes*; FA = *failure/ability*; FE = *failure/effort*; FEx = *failure/external causes*; SRB = school refusal behavior.

$n_p^2 = .04$). The *non*-SRB profile scored the highest means in the self-attributions of *success* to *ability, effort,* and *external causes*, and in the self-attributions of *failure* to *external causes*. Moreover, this group scored the lowest means in the self-attributions of *failure* to *ability* and *effort* (see Table 3). In contrast, the *high* SRB profile presented the highest mean scores in the self-attributions of *failure* to internal causes (i.e., *ability* and *effort*), as well as the lowest mean scores in the self-attributions of *success* to *internal* and *external causes*, and in the self-attributions of *failure* to *external causes*.

The post hoc comparisons revealed statistically significant differences between the *non*-SRB profile and the *moderately high, anxious*, and *high* SRB profiles in the self-attributions of *success* to *ability*, *effort*, and *external causes*, with small and moderate effect sizes (see Table 4). Statistically significant differences were also identified between these groups in all the self-attributions of *failure*, except for the self-attribution to *effort*, where no statistically significant differences were found between the *non*-SRB and the *moderately high* SRB profiles. Small and moderate effect sizes were obtained for the statistical differences in the self-attributions of *failure*. However, it is important to highlight that, in the self-attribution of *failure* to *ability*, adolescents with *high* SRB scored significantly higher than those with *non*-SRB, showing a large effect size. On the other hand, the *moderately high* SRB profile had small effect size differences with higher scores than the *anxious* SRB group in the self-attributions of *success* to *ability* and

effort, as well as moderate effect size differences with lower scores than the *high* SRB group in the self-attributions of *failure* to *effort*. Lastly, it should be noted that no statistically significant differences were obtained between the *anxious* SRB and the *high* SRB groups.

Discussion

The present research had a dual purpose: in the first place, to find out SRB profiles based on Kearney and Silverman's functional model (1993) and, in the second place, to identify statistically significant differences between SRB profiles and academic self-attributions based on Weiner's model (Weiner, 1985). A representative sample of Spanish adolescents aged 14–17 was used for achieving the objectives.

The findings support the first study hypothesis, since four profiles were identified, which coincide with the most common groups of adolescent SRB found in previous literature (Delgado et al., 2019; Giménez-Miralles, Gonzálvez, Sanmartín et al., 2021; Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019, 2020; Gonzálvez, Díaz-Herrero, Vicent et al., 2019, 2020; Gonzálvez, Inglés, Vicent et al., 2020; Gonzálvez, Kearney et al., 2018). Thus, participants with low, moderately high, and high levels of ANA, ESE, PAS, and PTR were grouped into the groups non-SRB, moderately high SRB, and high SRB, respectively. Furthermore, students with high levels of AA and ESE (i.e., SRB motivated by negative reinforcement), and

Table 4
Cohen's d value for post hoc contrasts between the latent profiles in academic self-attributions for success and failure

Variable	Non-SRB vs moderately high SRB	Non-SRB vs anxious SRB	Non-SRB vs high SRB	Moderately high SRB vs anxious SRB	Moderately high SRB vs high SRB	Anxious SRB vs high SRB
SA	.23	.46	.50	.26	–	–
SE	.22	.53	.62	.31	–	–
SEx	.29	.37	.61	–	–	–
FA	.42	.55	.80	–	–	–
FE	–	.27	.71	–	.62	–
FEx	.38	.44	.67	–	–	–

SA = *success/ability*; SE = *success/effort*; SEx = *success/external causes*; FA = *failure/ability*; FE = *failure/effort*; FEx = *failure/external causes*; SRB = school refusal behavior.

also of PAS (i.e., SRB motivated by positive reinforcement) were grouped into the mixed profile called Anxious SRB. These results prove the complexity of SRB, since around 20% of the population examined (i.e., the high and anxious SRB groups) were characterized by a high tendency to justify their non-attendance because of factors referred to negative and positive reinforcement, multiple causes being used simultaneously (Kearney & Sheldon, 2017).

So far, the four groups are the most repeated throughout the profile solutions identified in adolescence, but only the study by Gonzálvez, Díaz-Herrero, Sanmartín et al. (2020) identified one group with mixed SRB and three groups with low, moderately high, and high SRB into the profile solution. The rest of the works obtained solutions with some of the most common adolescent SRB profiles and other groups, such as those characterized by SRB due to negative or positive reinforcements. The disparity of profiles could be explained by the different techniques used to classify students into SRB groups (i.e., cluster analysis, Latent Class Analysis, and LPA), but also may be caused because the previous studies were conducted in different countries (i.e., Ecuador, Chile, and Spain). Considering the repetition of the low, moderately high, high, and mixed SRB groups throughout the profile models, the high tendency to drop out of high school that has been found in Spanish students (Statistics National Institute, Spain, 2021), and the appropriateness of the LPA to identify homogeneous latent profiles (Araújo et al., 2019), it is important to continue doing research on SRB profiles by performing LPA with Spanish adolescents to corroborate the four groups.

Regarding the differences between the adolescent SRB groups and academic self-attributions, students with anxious SRB scored significantly lower in the self-attributions of *success* to *ability* and *effort*, but significantly higher in the self-attributions of *failure* to *ability* than the non-SRB profile, these differences having moderate effect sizes with *d*-values around .50. The attributional style obtained for this profile corroborate the second hypothesis in which it was expected that adolescents with a mixed SRB profile tended to attribute their academic failures more internally and their successes less internally, as it was previously found in the Chilean population (Lagos-San Martín et al., 2014). Therefore, the present study adds on to scientific literature the maladaptive attributional style of adolescents with SRB in another Hispanic country: Spain.

In addition, there seems to be a continuity across childhood and adolescence in the attributional style of Spanish school refusers with a mixed profile. Thus, previous studies found that Spanish children with high levels of ANA and ESE (Giménez-Miralles et al., 2021; Gonzálvez, Sanmartín et al., 2018), and also of PAS (Gonzálvez et al., 2021) tended to take more responsibility for the academic failures than for the successful results. This attributional tendency was also identified in Spanish, Chilean, and German children with high levels of anxiety (Fernández-Sogorb et al., 2020, 2021; Zhou & Urhahne, 2013) and in Chilean adolescents with high levels of school anxiety (Lagos-San Martín et al., 2016). Given that learners with high scores in anxiety and students with high levels of SRB

motivated by AA, ESE, and PAS tend to use similar academic self-attributions, the findings of the present research are in line with those referred to the first three factors of the SRAS-R as the main reasons that justify SRB due to anxiety (e.g., Fernández-Sogorb et al., 2018; Gonzálvez, Inglés et al., 2018; Gonzálvez, Inglés, Fernández-Sogorb et al., 2020).

In this vein, the results of this study reveal that Spanish adolescents with moderately high SRB scored significantly higher in the self-attribution of *success* to *ability* and *effort* than those with anxious SRB, these differences having a small effect size. Since adolescents grouped into the moderately high SRB profile showed higher *z* scores in the first three dimensions of the SRAS-R than in the fourth factor, it is coherent that their attributional style was similar to that previously found in children with moderate levels of anxiety. Specifically, elementary school students with moderate anxiety tended to attribute their successes to internal causes to a greater extent than their peers with high anxiety (Fernández-Sogorb et al., 2021). This attributional tendency fosters adolescents' perception of their personal worth (i.e., self-esteem), which in turn benefits learning (Wang et al., 2019; Zhao et al., 2021).

On the other hand, no statistically significant differences were identified in academic self-attributions between the high and anxious SRB profiles. In this sense, it is not surprising that both groups showed the same attributional style in comparison with the non-SRB group. However, larger effect size differences were obtained between students with high SRB and non-SRB than between learners with anxious SRB and non-SRB. It is worth noting the greater tendency of the high SRB profile to attribute *failures* to *ability* in comparison with the non-SRB, since these differences had a large effect size and, consequently, can be considered as the most worrying result. As explained in the introduction, the causal dimensions of an attributional tendency influence on realism of expectations about next academic results and, therefore, on students' participation in activities (Weiner, 2014, 2018). In this sense, ability is an internal, stable, and uncontrollable causal self-attribution. Learners who perceive that they failed because of their lack of ability tend to consider that it is a persistent condition, which can not be improved. Attention must be paid to possible expectations of school failure, since they are not realistic and students could reduce their efforts because of their feeling of hopelessness and poor self-esteem (Erhun et al., 2022; Stupnisky et al., 2011).

Despite the relevant contributions of the present work, it has several limitations that should be addressed in future research. Firstly, according to Cho and Kim (2015), Cronbach's alpha coefficients are considered acceptable whether they are above or equal .70. However, some factors of the SRAS-R (i.e., PTR) and the SAS (i.e., *success/external causes*; *failure/effort*; *failure/external causes*) had reliability coefficients lower than .70. Secondly, adolescent SRB profiles have been identified in a community sample and it is unknown whether specific samples would be grouped into the same four profiles. For this reason, future studies should recruit adolescents with school attendance problems or students diagnosed with anxiety disorders and analyze whether the four-profile

model is replicated. Thirdly, this study is pioneer on demonstrating the association between SRB and academic self-attributions in the Spanish adolescent population and the results could only be compared with those previously obtained in the Chilean adolescent population (Lagos-San Martín et al., 2014). Therefore, it is necessary to examine the attributional style of adolescent SRB profiles in other countries and to address whether there are differences across cultures. Furthermore, there exists evidence of the poor perception of family functioning manifested by students with high levels of SRB (Gonzálvez, Díaz-Herrero, Sanmartín et al., 2019) and the influence of family stereotypes on learners' self-perception of ability (Tomasetto et al., 2015). In this sense, it would be convenient to examine whether family context influences the attributional tendency of adolescents with SRB. Finally, no causal inferences between SRB and academic self-attributions can be drawn from the results of this research. Consequently, future studies should address this issue by using structural equation models or longitudinal data.

This research has noteworthy implications for educational practice. Two risk SRB profiles have been identified in the Spanish adolescent population. On the one hand, 18.6% of the sample was grouped into the anxious SRB profile. These students are characterized by a high tendency to refuse school because of anxiety. Specifically, they experience generalized anxiety symptoms and intense fear when anticipating social, evaluative, and separation situations in the school setting. In addition, they tend to attribute their academic results of *failure* more to *ability* and their *successes* less to *internal causes*, which may lead them to develop fear of failure. These learners should be taught to relate to themselves in a kindlier way, so they do not continue to avoid situations perceived as a threat. Neff (2003) referred to self-compassion as the ability to not judge one's emotions and thoughts and to understand that negative experiences are common among human beings. In this sense, self-compassion training would help adolescents with anxious SRB to develop a positive attitude toward anxiety-provoking events and academic failures. In fact, self-compassion training has proven effective in reducing anxiety and fear of failure (see Neff, 2019 for a review). Furthermore, it is necessary to replace their maladaptive attributional style with the tendency to attribute academic successes and failures to internal, unstable, and controllable causal self-attributions in order to motivate them to continue their efforts (Perry & Hamm, 2017; Stiensmeier-Pelster & Heckhausen, 2018). For this reason, self-compassion training should be applied along with attribution retraining, which consists of giving students direct feedback on each academic result to orient them in the selection of causal explanations. It should be noted that attribution retraining has proven effective in the adolescent population (see Graham & Taylor, 2022 for a review).

On the other hand, 2.1% of the participants were grouped into the high SRB profile. Given that these students, in comparison with those with anxious SRB, scored high in the same explanatory factors of SRB (i.e., ANA, ESE, and PAS) and showed a tendency to select the same types of causes to explain their academic results, self-compassion training and attribution retraining should be also implemented to help adolescents with high SRB. However, there is an important difference between the two profiles: learners with high SRB showed a high tendency to justify their SRB by referring to the *Pursuit of Tangible Reinforcements outside of school* (i.e., PTR) along with ANA, ESE, and PAS. In other words, the High SRB group not only refuse school because of anxiety but also perceive that there are more interesting stimuli outside of the educational setting. In this regard, teachers should question their own educational practice and develop a close relationship with students by considering their worries and interests. Moreover, teachers should promote positive relationships between learners by implementing cooperative learning strategies that foster students' inclusion and academic achievement (Filippello et al., 2019; Klein et al., 2022;

Wattanawongwan et al., 2021). All adolescents would benefit from these actions, but especially those with High SRB, who would perceive high school as a motivating environment for learning.

Conflicts of interest

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