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## Typologies of Spanish Youth with School Refusal Behavior and Their Relationship with Aggression

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### ABSTRACT

School refusal behavior is a serious problem that has significant consequences for the personal, academic, and social adjustment of young people. Although school attendance problems have been associated with physical violence, aggression or cyberbullying, there is a lack of studies that have analyzed the relationship between this problematic behavior and aggressiveness based on the Buss – Perry Aggression model. This work has two main goals: first, to identify school refusal behavior profiles based on the functional model of this variable; and, secondly, to analyze possible differences in four major aggression dimensions based on the Buss – Perry aggression questionnaire (Physical Aggression, Verbal Aggression, Anger, and Hostility) depending on the profiles identified. Participants were 1,509 Spanish adolescents (60.6% male) aged 12–18 years ( $M = 14.81$ ;  $SD = 1.85$ ). The School Refusal Assessment Scale-Revised (SRAS-R) and the Aggression Questionnaire (AQ) were administered. Four school refusal behavior profiles (Non-School Refusal Behavior, Low School Refusal Behavior, Mixed School Refusal Behavior, and High Mixed School Refusal Behavior) were identified using Latent Profile Analysis, and differential functioning of those profiles across the dimensions of aggression was found. The Mixed School Refusal Behavior and High Mixed School Refusal Behavior groups showed the highest mean scores in the dimensions of aggression. These findings highlight that the identification of different profiles and risk factors regarding school refusal behavior may be relevant for early intervention. Findings are discussed in relation to the importance of reducing the risk of violent and aggressive behaviors to prevent school attendance problems in adolescents and younger ages.

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School Attendance Problems (SAPs) increase their prevalence significantly in the secondary education stage, thereby becoming a risk factor for the emotional, academic, and social adjustment of adolescents (Kearney & Graczyk, 2020). In fact, numerous studies have shown associations between school

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refusal behavior and mental health problems (Egger et al., 2003; Heyne & Sauter, 2013; Kearney & Albano, 2004), low performance (Thornton et al., 2013), school dropout (Balfanz & Byrnes, 2019), pre-criminal behavior, and substance use (Dembo et al., 2013). In Spain, the number of students who do not complete compulsory secondary education and who do not receive formal or non-formal education is worrying, affecting in 2020 20.2% of boys and 11.6% of girls between 18 and 24 years old (National Institute of Statistics in Spain, 2021). These figures place Spain among the European Union countries with the worst indicators in this field. More research is needed on school refusal in Spanish adolescents in order to prevent early educational dropout and its repercussions (Kethineni et al., 2021).

SAPs, due to their wide heterogeneity, represent an extremely complex phenomenon that various authors have tried to analyze from different perspectives (Heyne et al., 2019; Kearney & Graczyk, 2020). Among the most relevant contemporary theoretical approaches, the functional model developed by Kearney and Silverman (1993) stands out as it establishes a classification of the functions or reasons why children and adolescents refuse to attend school. This functional model proposes four factors or functional conditions that motivate the school refusal behavior, which are: (a) avoidance of school-related stimuli provoking negative affectivity, (b) escape from aversive social or evaluative situations, (c) garnering parental attention; and (d) positive tangible reinforcement. These functions are linked to specific reinforcements that young people often get from their school refusal behavior. In the first two factors, the school refusal behavior is maintained by negative reinforcement (avoiding unpleasant situations linked to the school context) and, in the last two factors, by positive reinforcement (achieving something positive outside of school such as parental attention or playing videogames). Likewise, in the first three factors, SAPs are caused mainly by fear or anxiety about school situations, while in the fourth factor, young people do not attend school due to a lack of interest or challenging behavior toward adults. From this approach, it is considered that school refusal behavior can be triggered by several functions or reasons at the same time and, therefore, the behaviors can be simultaneously reinforced both positively and negatively (Kearney, 2016; Kearney & Diliberto, 2014).

### **School refusal behavior profiles**

Assuming this multicausality in the etiology of school refusal behavior, especially in recent years, a series of studies have been carried out with community samples (e.g., Delgado et al., 2019; Dube & Orpinas, 2009; Gallé-Tessonneau et al., 2019; González et al., 2018, 2020) which have tried to identify school refusal behavior profiles from the four factors of the functional model evaluated by the School Refusal Assessment Scale-Revised (SRAS-R; Kearney,

2002). Among the studies carried out with adolescents, the profiles that have appeared most frequently have been: Non-School Refusal Behavior (low scores on the four factors of the SRAS-R), School Refusal Behavior by Negative Reinforcements (high scores on the first two factors of the SRAS-R), School Refusal Behavior by Positive Reinforcements (high scores on the last two factors of the SRAS-R), School Refusal Behavior by Tangible Reinforcements (high scores on the fourth factor of the SRAS-R), and School Refusal Behavior by Multiple or Mixed Reinforcements (high scores on factors for negative and positive reinforcement) (Delgado et al., 2019; Dube & Orpinas, 2009; González et al., 2018, 2020). Results of these studies revealed that the most maladaptive profiles were the School Refusal Behavior by Multiple or Mixed Reinforcements and the School Refusal Behavior by Negative Reinforcements since the young people belonging to these groups were those who showed higher scores in negative emotional states, school anxiety, and aggression in cases of cyberbullying (Delgado et al., 2019; González et al., 2018, 2020).

Given the negative repercussions that school refusal behavior has on the development of young people, the identification of different profiles and risk factors related to school refusal behavior is essential for early detection and intervention. In this regard, school refusal behavior has been associated with various internalizing and externalizing symptoms that include anxiety, depression, somatic complaints, tantrums, aggressiveness, and disruptive behaviors, among others (Egger et al., 2003; Ingul & Nordahl, 2013; Kearney & Albano, 2004). The investigations that have analyzed school refusal behavior from the dimensions of the functional model have found that students whose school refusal behavior is maintained by negative reinforcement (avoiding school situations that cause negative affectivity or social aversion) are more likely to suffer from generalized anxiety disorders, social anxiety, and depression (Haight et al., 2011; Kearney & Albano, 2004). In students whose school refusal behavior is maintained by positive reinforcement, if the reason for school refusal is to seek the attention of other people, separation anxiety disorder is more frequent, and if the reason is to obtain tangible reinforcements from outside of school, externalizing problems such as oppositional defiant disorder are more likely (Haight et al., 2011; Kearney & Albano, 2004). In students who show a mixed profile (due to positive and negative reinforcement) both emotional and behavioral problems are frequent (Dube & Orpinas, 2009).

### **School refusal behavior and aggression**

In recent decades, another problem that also seems to have had a significant influence on an individual's adaptation to the school context is the manifestation of aggressive behaviors, which are becoming increasingly present in the classroom (Farnicka, 2017; Garaigordobil, 2017). Various studies have

reported that students with more aggressive behavior show lower academic performance (Farnicka, 2017; Muñoz-Reyes et al., 2019; M. S. Torregrosa et al., 2012), symptoms of depression, social and school anxiety (Crick et al., 2006; Gros et al., 2010; Hatfield & Dula, 2014; Loudin et al., 2003; M. Torregrosa et al., 2020), and substance use (Storch et al., 2004).

According to Buss and Perry (1992), aggression is understood as a multifactorial phenomenon in which the person has a propensity toward hostile thoughts and negative affect, as well as the inclination to attack physically and verbally. These authors, based on this conceptualization, designed the Aggression Questionnaire (AQ; Buss & Perry, 1992) which assesses aggression using four subscales: Physical Aggression, Verbal Aggression, Anger, and Hostility. Physical Aggression and Verbal Aggression represent the motor components of aggressive behavior. Anger implies a physiological activation and preparation for aggression and constitutes the emotional or affective component. Lastly, Hostility represents the cognitive component and involves feelings of opposition and injustice. Buss and Perry model offers “an influential framework that emphasized the importance of individual differences and psychological functioning” (Garofalo et al., 2016, p. 3). This model determined that aggressive behavior is not only made up of a motor component, which includes physical and verbal aggression, but also an emotional component (anger) and a cognitive component (hostility).

Although some studies have associated school attendance problems with behaviors such as physical violence (Garry, 1996), aggression (Lounsbury et al., 2004), or cyberbullying (Morin et al., 2018; Wright, 2015), there are very few studies that, to date, have related aggressiveness, assessed using the AQ, with the school refusal behavior based on the functional model. Specifically, there are two research works related to this issue that provide some empirical evidence in this regard and should be mentioned. The study by Vicent et al. (2018), carried out with a sample of 1,202 Spanish students aged between 8 and 12 years, observed that children characterized by high levels of aggression scored significantly higher in the first three factors of the SRAS-R compared to their peers with low levels of aggressive behavior. Similarly, Aparicio-Flores et al. (2020) investigated with 501 Spanish children between the ages of 8 and 12 to analyze the differences between students with high and low levels of aggressiveness with respect to the SRAS-R factors to determine to what extent the different school refusal behavior factors influenced aggressive behavior. The results of this study revealed that when children with high and low scores on the different subscales of the AQ were compared, those who showed high levels of Physical Aggression and Hostility had higher scores on the first three factors of the SRAS-R and those who presented higher scores in Verbal Aggression and Anger had higher scores in the first two factors of the SRAS-R. From the previous data, the logistic regression models highlighted

that as the scores in school refusal behavior increased, the probability of having a high aggressive behavior also increased. Identifying school refusal behavior profiles and determining whether these profiles are associated with aggressive behaviors provides clues that can be extremely useful for establishing better preventive measures and intervention strategies. This study analyzes the relationships between both constructs (school refusal behavior and aggressiveness) for the first time in a different age range that includes Spanish adolescents, using a classification process based on a mixture of latent variables that exceeds traditional statistical techniques (Schreiber, 2017).

This research had two objectives. The first objective was to determine school refusal behavior profiles through latent profile analysis, considering the possible reasons underlying the school refusal behavior according to the functional model. Considering previous studies (Delgado et al., 2019; Dube & Orpinas, 2009; González et al., 2018, 2020), four profiles were expected to be found: Non-School Refusal Behavior, School Refusal Behavior by Negative Reinforcements, School Refusal Behavior by Positive Reinforcements, and School Refusal Behavior by Mixed or Multiple Reinforcements. The second objective was to examine the differences in the aggressiveness dimensions (Physical Aggression, Verbal Aggression, Anger, and Hostility) in the different profiles that had been previously determined. In this regard, the School Refusal Behavior by Mixed Reinforcements profile was expected to be the most maladaptive and, therefore, be associated with statistically significant higher scores on the AQ aggressiveness subscales (Physical Aggression, Verbal Aggression, Anger, and Hostility) when compared to the other profiles (Dube & Orpinas, 2009; González et al., 2018, 2020).

## **Method**

### ***Participants***

Firstly, 1,586 students made up the study sample, however, 45 participants were excluded because their answers were incomplete and 32 other participants were excluded because their parents or legal guardians did not provide informed written consent. The final sample consisted of 1,509 Spanish adolescents (60.6% males) with ages ranging from 12 to 18 ( $M = 14.81$ ;  $SD = 1.85$ ). Students were attending 13 public or private high schools in urban and rural areas of Alicante (Spain) and six classrooms were randomly selected from each high school. The ethnic composition of the sample was: 89.7% Spaniards, 5.2% South Americans, 4.2% Arabs, and 0.9% of other origins. The socio-economic level, based on the parents' labor situation and academic education levels, was considered as middle class.

## Instruments

School Refusal Behavior Assessment Scale-Revised (SRAS-R; Kearney, 2002). The SRAS-R analyzed the relative strength of four functional conditions of school refusal behavior in children and adolescents between the ages 8 to 17. This instrument consisted of 24 items with a 7-point Likert scale (0= *Never*; 6= *Always*), grouped into four factors: FI. To Avoid Negative Affectivity (6 items, e.g., “How often do you stay away from school because you will feel sad or depressed if you go?”); FII. To Avoid Social Aversion and/or Evaluation (6 items, e.g., “If it were easier for you to make new friends, would it be easier for you to go to school?”); FIII. To Pursue Attention (6 items, e.g., “How much would you rather be taught by your parents at home than by your teacher at school?”); and FIV. To Pursue Tangible Reinforcement (6 items, e.g., “How often do you refuse to go to school because you want to have fun outside of school?”). In this study, the Spanish language version of the scale developed by González et al. (2016), which consisted of 18 items whose degree of reliability (Cronbach’s alpha) ranged from .70 (FI) to .87 (FIII), was used. Acceptable internal consistency indices (Cronbach’s alpha) were obtained in this study: .70, .74, .86, and .71, respectively, for the four factors of the SRAS-R.

Aggression Questionnaire (AQ; Buss & Perry, 1992). The AQ is a 29-item self-report measure with a 5-point Likert scale (1 = *uncharacteristic of me*, 5= *very characteristic of me*). Four dimensions are assessed with this instrument: Physical Aggression (9 items, e.g., “If they provoke me enough, I can hit another person”), Verbal Aggression (5 items, e.g., “When I disagree with my friends, I argue with them”), Anger (7 items, e.g., “I get angry quickly, but it goes away quickly”), and Hostility (8 items, e.g., “Sometimes I am quite envious”). Santisteban and Alvarado (2009) adapted the AQ for Spanish pre-adolescents and adolescents, whose levels of reliability range from .65 (Anger) to .80 (Physical Aggression). The Spanish version of this instrument was used. Acceptable internal consistency indices (Cronbach’s alpha) were obtained in this study: .83 (Physical Aggression), .72 (Verbal Aggression), .70 (Anger), and .68 (Hostility).

## Procedure

Study approval from the Ethical Committee of the University of Alicante (UA-2017-09 05) was obtained before school principals were contacted and parent/student consent was sought. The instruments (SRAS-R and AQ) were administered in each participating classroom, having an average administration time of 30 minutes. Research assistants read the instructions out loud and were present throughout the completion of the questionnaires. All of the students participated voluntarily, and no student declined to participate once they had started participating in the research.



## Statistical analysis

Before running the Latent Profile Analysis (LPA), the scores obtained in the four factors of the SRAS-R were standardized. Standardized *z* scores are interpreted as follows: *z* scores below  $-.5$  suggest low SRB levels, between  $-.5$  and  $.5$  indicate moderate SRB levels with a downward trend if they are negative scores or with a trend toward high scores if they are positive scores; and higher than  $.5$  show high SRB levels (Sanmartín et al., 2018). The LPA was performed to establish the school refusal profiles. To determine the number of latent profiles best fitting our data, a series of latent profile analysis models and a variety of fit indices were applied. These included The Akaike Information Criterion (AIC); the Bayesian Information Criteria (BIC); the Vuong-Lo-Mendell-Rubin likelihood-ratio test (LRT); the bootstrap likelihood ratio test (BLRT); entropy; and the size of the classes that should include at least 1% of the sample. Optimal group solution had the lowest AIC and BIC value, and significant LRT and BLRT values, as well as entropy values approaching 1 (Jung & Wickrama, 2008). Beyond these indices, the theoretical feasibility and psychological significance, together with the maximization of the inter-class differences of each of the groups, should be considered when selecting the best model.

Second, a multivariate analysis of variance (MANOVA) was conducted to examine if aggression dimensions (Physical Aggression, Verbal Aggression, Anger, and Hostility) would differ across the subgroups of school refusers. In addition, post hoc tests (Scheffé's method) were performed, and the effect size was calculated using the *d* index which was analyzed according to Cohen's (1988) interpretation, distinguishing between a small ( $0.20 \leq d \leq 0.49$ ), a moderate ( $0.50 \leq d \leq 0.79$ ), and a large magnitude ( $d \geq 0.80$ ). Analyses were calculated using the SPSS 24 statistical package and Mplus version 8.

## Results

### Latent profiles of school refusal behavior

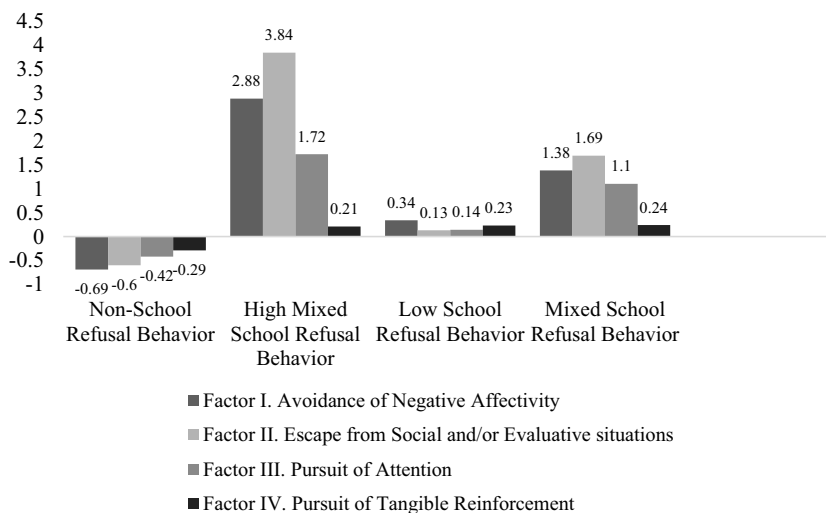
Table 1 shows the fit indices for the six estimated models. The AIC and BIC values decreased progressively as the number of profiles increased. However, the six- and seven-profile models were rejected because these solutions,

**Table 1.** Data fit of all models.

Models	AIC	BIC	BIC-adjusted	LRT	LRT-adjusted	BLRT	Entropy	Size
2	16134.20	16203.35	16162.06	.00	.00	<.001	.90	0
3	15817.97	15913.71	15856.53	.13	.14	<.001	.74	0
4	15641.30	15763.64	15690.58	.01	.01	<.001	.75	0
5	15555.87	15704.81	15615.86	.53	.54	<.001	.73	0
6	15468.54	15644.07	15539.24	.01	.01	<.001	.76	1
7	15412.90	15615.03	15494.31	.24	.25	<.001	.75	1

LRT = Vuong-Lo-Mendell-Rubin Likelihood-Ratio Test; BLRT = Bootstrap Likelihood Ratio Test.





**Figure 1.** School refusal behavior profiles.

according to the size values, included one profile with less than 25 cases. The three- and five-profile models were also rejected because the LRT  $p$ -values were greater than .05. Considering these criteria and the interpretability in relation to previous studies, the four-profile model was the most accurate in reporting a greater precision in the participants' classification.

The first profile classified 680 participants (45.6%), who reported low levels in the first two factors of the SRAS-R and scores with a downward trend in the third and fourth factors. When the score does not reach the negative value of  $-.5$  but it is not a high score either (value greater than .5) and shows a trend to a negative value, has named as "downward trend." Therefore, it was named Non-School Refusal Behavior. The second profile included 25 participants (1.66%), who were characterized by high levels in the first three factors of the SRAS-R. As such, it was labeled as High Mixed School Refusal Behavior. The third profile, called Low School Refusal Behavior, consisted of 663 participants (43.94%) with moderate scores in the four factors of the SRAS-R which did not become high scores. The fourth profile, Mixed School Refusal Profile, classified 141 participants (9.34%) with high scores in the first three factors of the SRAS-R but not as high as in the second profile identified (see Figure 1). The same profiles identified for the total sample were found in men and women.

### **Inter-class differences in aggression**

A MANOVA established whether the four profiles of school refusal behavior differed in the mean scores of aggression dimensions. Statistically significant differences were identified among the latent profiles in all factors of the SRAS-R (Wilks' lambda = .86,  $F_{(12,1505)} = 19.91$ ,  $p < .001$ ,  $\eta^2 = .10$ ). The High Mixed

**Table 2.** Means and standard deviations obtained by the four profiles of school refusal behavior in AQ dimensions.

AQ dimensions	Non SRB		High Mixed SRB
	<i>M</i>	<i>SD</i>	<i>M</i>
Physical Aggression	15.12	6.49	19.40
Verbal Aggression	9.24	3.02	10.76
Anger	9.07	3.59	12.12
Hostility	10.84	3.80	17.60

AQ = Aggression Questionnaire; SRB = School Refusal Behavior; \* $p < .001$ .

School Refusal Behavior and the Mixed School Refusal Behavior profiles reported the higher mean scores in the four dimensions of aggression. The highest scores in Physical Aggression, Anger, and Hostility were obtained by the High Mixed School Refusal Behavior profile, while the Mixed School Refusal Behavior profile revealed the highest mean score in Verbal Aggression. The Non-School Refusal Behavior profile obtained the lowest scores in all the aggression dimensions (see Table 2).

Table 3 shows the post hoc comparisons for the analysis of the effect size in the statistically significant differences found between the groups. Comparisons between of large and moderate effect sizes were found for the total sample between the Non-School Refusal Behavior profile and the High Mixed School Refusal Behavior profile (ranging from 1.75 in Hostility to .65 in Physical Aggression) and between the Non-School Refusal Behavior profile and the Mixed School Refusal Behavior profile (ranging from 1.15 in Hostility to .62 in Verbal Aggression). Comparisons of a moderate ( $d =$  between .64 and .54) and small ( $d =$  between .29 and 0.40) effect size were found between the Low School Refusal Behavior profile, the Non-School Refusal Behavior, and the Mixed School Refusal Behavior profiles. Non-statistically significant differences were found for the first three dimensions of the AQ in the comparisons between the High Mixed School Refusal Behavior profile, the Low-School Refusal Behavior, and the Mixed School Refusal Behavior profiles. Effect sizes between profiles based on gender revealed differences between boys and girls. When comparing the profiles of the Non-SRB with the High Mixed SRB and the Mixed SRB in the Physical and Verbal Aggression dimensions, large effect sizes were obtained for girls while small ones for boys. On the contrary, when comparing the Non-SRB and High Mixed SRB profiles for the Anger dimension, the boys reached a large effect size while the girls small.

## Discussion

This study had two objectives: first, to identify, through latent profile analysis, school refusal behavior profiles based on the four factors proposed by the functional model (Kearney & Silverman, 1993); and secondly, to examine the

**Table 3.** Cohen's D value for post hoc contrasts between profiles on AQ dimensions.

AQ Dimensions	Non SRB vs High Mixed SRB			Non SRB vs Low SRB			Non SRB vs Mixed SRB			High Mixed SRB vs Low SRB			High Mixed SRB vs Mixed SRB			Low SRB vs Mixed SRB		
	Total (T)	Boys (B)	Girls (G)	T	B	G	T	B	G	T	B	G	T	B	G	T	B	G
Physical Aggression	-.65	-.42	-1.19	-.24	-.23	-.33	-.34	-.26	-.56	-	-	-	-	-	-	-	-	-
Verbal Aggression	-	-	-.32	-.33	-.23	-.48	-.62	-.47	-.83	-	-	-	-	-	-	-.31	-.24	-.38
Anger	-.84	-1.14	-.43	-.40	-.43	-.34	-.70	-.70	-.68	-	-	-	-	-	-	-.29	-.27	-.30
Hostility	-1.75	-1.87	-1.59	-.54	-.48	-.62	-1.15	-1.08	-	1.24	1.45	.99	.48	.64	.25	-.64	-.61	-.67

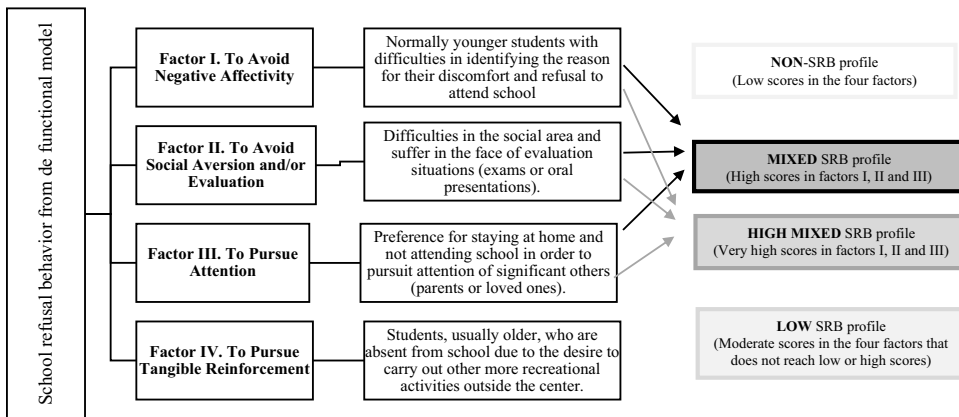
AQ = Aggression Questionnaire; SRB = School Refusal Behavior.

differences in aggressive behavior (Physical Aggression, Verbal Aggression, Anger, and Hostility) depending on the different school refusal behavior profiles previously identified in a large community sample of Spanish adolescents.

### ***School refusal behavior profiles***

In line with the results obtained in previous studies (Delgado et al., 2019; Dube & Orpinas, 2009; González et al., 2018, 2020), four profiles were predicted: Non-School Refusal Behavior, School Refusal Behavior by Negative Reinforcements, School Refusal Behavior by Positive Reinforcements, and School Refusal Behavior by Mixed Reinforcements. Our findings confirmed the existence of four profiles, but they differed slightly from those expected. Two of the identified classes showed low scores in the first two factors of the SRAS-R and scores with a downward trend in the third and fourth factor (45.06%; Non-School Refusal Behavior) or were characterized by scores with a positive trend but were not significant in any of the SRAS-R factors (43.94%; Low School Refusal Behavior). The first of these classes, Non-School Refusal Behavior, coincided with the one identified in previous research with community samples of adolescents, also presenting a percentage of prevalence like that obtained in some studies (González et al., 2018, 2020; prevalence: 44.82–44.86%, respectively) and a little higher than other studies (Delgado et al., 2019; Dube & Orpinas, 2009; prevalence: 22.2–24.22%, respectively). The second of these classes, Low School Refusal Behavior, very close to the Non-School Refusal Behavior profile regarding its characteristics, had already been identified in a previous study, showing a slightly higher prevalence in the present study (González et al., 2020; prevalence: 34.23%).

However, in the other two classes identified, the school refusal behavior included both explanatory factors for positive and negative reinforcement. In fact, the third and fourth classes, called Mixed School Refusal Behavior and High Mixed School Refusal Behavior, were characterized by high scores in the first three factors and low scores in the fourth factor of the SRAS-R. The only difference between these two profiles was that in the High Mixed School Refusal Behavior class the scores in the first three factors of the SRAS-R were higher than those for the Mixed School Refusal Behavior profile. This type of profile is like that obtained in other studies with adolescents (González et al., 2018, 2020) and, considering the sum of the prevalence percentages of both profiles (11%), its prevalence was also similar to that of previous studies (12.20–13.43%). Therefore, the first hypothesis can only be partially confirmed. Figure 2 presents a graphical representation of each of these school refusal behavior profiles and their features.



**Figure 2.** Relationship between the four functional factors of the SRAS-R and school refusal behavior profiles identified.

Research on the stability of aggression tends to reveal more patterns of continuity than discontinuity (Piquero et al., 2012). This continuity is particularly strong over time in individuals manifesting early highly aggressive behavior (Piquero et al., 2012). Regarding the similarities and differences between the identified profiles and prior studies carried out with children, it seems that with age the Mixed School Refusal Behavior group considerably increases their scores in the first three factors of the SRAS-R, generating a new group in adolescents, the High Mixed School Refusal Behavior profile. It is worrying that with age the mixed profile increases its scores, being the most maladaptive profile with respect to the aggressiveness variable. Future studies with adolescents should continue to explore whether these profiles are replicated. In addition, identifying the impact of aggressive behavior during adolescence will allow us to better understand how this problem affects young people to prevent and respond to their needs.

### **School refusal behavior and aggression**

From these four latent classes, aggressive behavior was analyzed, finding inter-class differences in the scores for Physical Aggression, Verbal Aggression, Anger, and Hostility. The Mixed School Refusal Behavior and High Mixed School Refusal Behavior profiles had significantly higher scores than the other profiles on all subscales or dimensions of aggressive behavior. These results confirm the second hypothesis that anticipated that adolescents with a mixed profile would have higher scores in aggressive behavior and reinforces the findings of previous studies that highlight that students with a mixed profile show higher scores in maladaptive behaviors such as anxiety, school anxiety, depression, and stress (González et al., 2018, 2020). These results are in line with those obtained in other studies with Spanish children who have shown

high levels of aggression (Physical Aggression, Verbal Aggression, Anger, and Hostility), with behaviors of school refusal motivated by avoiding negative affectivity and social evaluation, and getting attention from significant others (Aparicio-Flores et al., 2020; Vicent et al., 2018).

When comparing the different profiles with each other, and considering the magnitude of the effect sizes, the adolescents belonging to the High Mixed School Refusal Behavior group were those who showed the highest scores in Physical Aggression, Anger, and Hostility. In other words, young people belonging to this profile, closely followed by those from the Mixed School Refusal Behavior profile, presented more aggressive behaviors such as inflicting physical harm on other people, high physiological activation that causes feelings of anger or hostility, attitudes of resentment, and negative evaluations and beliefs about others. In fact, when both profiles were compared, the effect sizes only yielded significant differences of low-magnitude with respect to the Hostility dimension, with the individuals belonging to the High Mixed School Refusal Behavior group showing more negative attitudes and beliefs about others.

On the contrary, the lowest scores in aggressiveness were obtained by the Non-School Refusal Behavior profile, followed by the Low School Refusal Behavior group. These results were supported by the analysis of effect sizes. In fact, when comparing the High Mixed School Refusal Behavior profile with the Non-School Refusal Behavior profile, the effect sizes were of high or moderate magnitude in almost all the AQ subscales, except for Verbal Aggression. Similarly, comparisons between the Mixed School Refusal Behavior and Non-School Refusal Behavior groups revealed moderate to high effect sizes for most AQ dimensions. It should be noted that in the comparison of the Low School Refusal Behavior profile with the rest of the profiles, the effect sizes did not yield significant results or were of small magnitude, except in the Hostility subscale, where the sizes were high or moderate. Comparisons by gender between these profiles revealed that particular attention must be paid to girls who belongs to the Mixed and High Mixed School Refusal Behavior profiles in Physical and Verbal aggression dimensions. The differences between these profiles were large in the case of girls, while small in magnitude for boys. For many years, researchers have attempted to explain gender-based differences in aggression. Traditionally, aggression has been studied as a masculine characteristic, an idea widely accepted (Im et al., 2018). However, these results warn that there are differences and that it is a problem that affects both boys and girls. More research in this regard must be developed to clarify the differences. The results of this work extend the results of previous research, analyzing school refusal behavior profiles and relating them for the first time to aggressive behaviors. Based on the data, we can highlight that the young people whose school refusal is motivated by anxiety or discomfort, which can be caused by stimuli related

to the school environment, social situations, evaluation, or situations that imply separation from loved ones, were those who showed higher scores in Physical Aggression, Verbal Aggression, Anger, and especially Hostility. Surprisingly, the fourth factor of the SRAS-R that in other studies has been related to externalizing behaviors such as oppositional defiant disorder (Kearney & Albano, 2004), was not part of any profile in our investigation and, therefore, has not shown any relationship with aggressiveness. This finding may be due to the community sample's characteristics or the methodology used in this study and more research is required for its analysis.

Our results support the existence of problems with aggressiveness in students whose school refusal is based on the first three factors of the SRAS-R since these were part of both the Mixed School Refusal Behavior profile and the High Mixed School Refusal Behavior profile. This fact constitutes an interesting contribution of the study as normally these factors have been more related to internalizing problems. In the first three factors of the SRAS-R, school refusal behavior is anxiety-based. In fact, these factors have shown comorbidity with anxiety symptoms or anxiety disorders (González et al., 2018; Haight et al., 2011; Kearney & Albano, 2004). Anxious symptomatology, as has been shown in various studies (e.g., Gros et al., 2010; Hatfield & Dula, 2014; Loudin et al., 2003; M. Torregrosa et al., 2020), exhibits relationships with aggressive behavior. According to various authors (e.g., Gros et al., 2010; Loudin et al., 2003) this could be because people with high social anxiety tend to interpret ambiguous or slightly negative social situations as unpleasant or catastrophic events (negative bias interpretation), which leads them to perceive the actions of others as being negative or hostile (hostile attribution bias), causing them to respond with aggressive demonstrations to retaliate. Another possible explanation, supported from a neurobiological perspective (e.g., Neumann et al., 2010), could be in the problems that some people with anxiety experience regulating emotions, which could trigger the manifestation of aggressive behaviors as a way of escape.

### ***Limitations and future research***

Despite its interesting contributions, this study presents some limitations that should be addressed in future research. First, the findings cannot be generalized to other cultures or age groups beyond the reference population of the study. Furthermore, due to the absence of studies on this subject, more studies with samples of different nationalities and ages are necessary to be able to make contrasts and thus grant greater validity and consistency to our results. In this study sample age range includes students who are in a not compulsory education stage (17–18 years). Future research should analyze if this factor affects patterns of school refusal. Second, the design used does not allow for the



establishment of causal relationships between aggressive behavior and school refusal behavior. This limitation could be solved using longitudinal designs examining the stability of the profiles over time or structural equation models. Third, the use of only self-report measures constitutes another limitation of the study. It would be essential that future research adopt a multi-method and multi-source perspective, collecting information from multiple informants (parents, teachers, colleagues) through different types of assessment instruments (interviews, observation scales, checklists).

### ***Implications for practice***

This study shows very interesting pioneering contributions regarding the relationships between school refusal behavior profiles and the different dimensions of aggressiveness, which can be very useful to carry out prevention and intervention in the educational field. A better understanding of the different school refusal profiles may enable researchers, educators, and clinicians to identify highest risk youth more accurately and further improve prevention practices for this population. The results of this work indicate that the Mixed School Refusal Behavior profile (characterized by high scores in the first three factors of the SRAS-R) is associated with a greater probability of presenting aggressive behaviors mainly related to Anger and Hostility, which implies that they are young people who show greater physiological activation and more negative attitudes and beliefs about other people. Educators, clinical psychologists professionals and others who address these students will likely need to consider the different aggressive patterns found between the school refusal profiles identified. Based on these results, there is a need to carry out prevention and intervention programs from a multidisciplinary perspective which fundamentally focus not only on correcting the cognitive distortions or biases that can occur in the processing of social information, but which also develop strategies that promote self-control and emotional self-regulation. Many prevention programs aim at manipulating peer dynamics in their effort to prevent aggression and violence (Van Lier et al., 2007). These preventive practices at early warning states may be advisable and may help those with school refusal profiles more maladaptive.

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## Ethical Standards and Informed Consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation [University of Alicante (UA-2017-09-05)] and with the Helsinki Declaration of 1975, as revised in 2000. Informed consent was obtained from all patients for being included in the study.

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