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REVIEW

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School refusal and anxiety among children and adolescents: A systematic scoping review

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Abstract
School refusal and anxiety are considerable problems among children and adolescents. While numerous studies were published, no review on the issue has been conducted to holistically reveal the current research results. This study uses a systematic scoping review design and aims to synthesize the results of the current studies on seeking an answer to the relationship between school refusal and anxiety to make recommendations for teachers, school counselors and administrators, and educational researchers for further research. Included studies were designed as qualitative, experimental, correlational, descriptive, or mixed-method, while studies designed as a thematic review, systematic review, and meta-analysis were excluded. The study identified 30 research articles that met the inclusion criteria within this scope. Results showed that anxiety is a prevalent factor associated with school refusal, whereas school refusal is directly and closely related to state and trait anxiety, social anxiety, school anxiety, and separation anxiety. Another finding was that school punishment, bad family functioning, parental depression, and parental anxiety are strong predictors of school refusal.

KEYWORDS
adolescents, anxiety, children, school refusal, systematic scoping review

1 | INTRODUCTION

School refusal is one of the considerable problems among children and adolescents. It is characterized by school attendance problems due to emotional problems

(Elliott & Place, 2019). School refusers experience difficulties going to school, attending school-related activities, staying, or not feeling well at school (Kearney, 2008a, 2008b; Kearney & Silverman, 1999). It is linked to a variety of internalizing and externalizing behavior problems and disorders such as anxiety disorders, mood disorders, and disruptive behavior disorders (Kearney & Albano, 2004; Jones et al., 2019; Jones & Suveg, 2015). Moreover, it is related to academic, physical, familial, social, and emotional problems in children and adolescents and even adulthood psychological problems (Kearney, 2008a, b; Sibeoni et al., 2018; Tekin et al., 2018). Additionally, it may lead to consequences such as the students' vulnerability to various risk factors due to their absence from school (Erden et al., 2015). In other words, school refusal adversely affects students in many ways, both in the short and long term. Those possible short-term outcomes include an increase in family conflict, academic failure, discipline problems, somatic complaints, sleeping problems, and alienation from peers and school (Egger et al., 2003; Heyne et al., 2001; Hochadel et al., 2014; Kearney, 2001; Kearney & Bensaheb, 2006). Possible long-term outcomes include school dropout, anxiety, depression, adulthood psychological problems, economic problems, substance abuse, difficulties in professional life and marriage, and even criminal behaviors (Henry et al., 2012; Kearney & Bensaheb, 2006; Rocque et al., 2017; Silove et al., 2002).

School refusal can also be handled as an anxiety-based problem (e.g., Albano et al., 2004; Egger et al., 2003; Gonzálvez et al., 2019; Hansen et al., 1998; Karlovec et al., 2008) since anxiety is one of the common problems among children and adolescents and constitutes a debilitating and facilitating condition (Velting et al., 2004). As a multidimensional affective state, anxiety consists of cognitive and behavioral responses that involve an unpleasant emotional reaction to school where they can feel stressed due to threatening situations such as academic failure, fear of negative evaluation, or communication apprehension (Aydin, 2008). This situation may result in physical concerns such as breathing difficulties, headaches, nausea, and heart-throbbing. Moreover, anxiety may create stressful academic problems and school failure and drop-out (Eicher et al., 2014). Furthermore, various types of anxiety are found to be associated with school refusal such as generalized anxiety disorder (Egger et al., 2003; Fernández-Sogorb et al., 2018; Gonzálvez et al., 2018a), separation anxiety (Egger et al., 2003; Hansen et al., 1998; Kearney & Albano, 2004; Kearney et al., 2005), social anxiety (Albano et al., 2004; Gonzálvez et al., 2019), and social and specific phobia (Egger et al., 2003; Heyne et al., 2001). To conclude, studies not only handled school refusal or anxiety as separate research topics but also focused on the relationship between the two. The rationale behind this study is that there is a need for a comprehensive, holistic, and synthetic review regarding implications for the target groups including children, adolescents, parents, teachers, school counselors, and administrators within this scope in an educational context. However, several terms, concepts, and definitions are presented before implementing the motives that guide this study.

1.1 | School refusal

There is confusion in terms of school non-attendance terminology. Truancy, school phobia, school dropout, and school refusal are commonly used similarly; however, the terms mentioned differ in their contexts. For example, *truancy* is an archaic term for school attendance problems which refers to illegal and unexcused school absenteeism (Sutphen et al., 2010), whereas *school phobia* refers to a specific fear related to school which leads to absenteeism (Kearney, 2008b). *School withdrawal* refers to deliberately keeping the child from school for various reasons such as child care or employment (Kearney & Fornander, 2018). *School dropout* refers to a permanent departure from school without graduation

(Doll, 2009). Unlike the terms above, *school refusal* refers to school non-attendance caused by emotional difficulties, mainly anxiety (Elliott & Place, 2019). In addition, the term *school exclusion* refers to problematic absenteeism that stems from school-based decision-making (Heyne et al., 2019). In other words, "school exclusion is said to occur when a young person is absent from school or specific school activities, for any period of time, caused by the school" (Heyne et al., 2019, p. 24). Within this perspective, *school refusal behavior* refers to child-motivated school attendance problems or difficulties remaining in classes for the entire day (Kearney, 2008b; Kearney & Silverman, 1999). In other words, as school refusal behavior includes both emotional distresses about school and truancy type school non-attendance, it can be used as an umbrella term. Kearney (2008b) defines four functions of school refusal behavior: (1) Avoiding school-related stimuli that provoke negative affectivity, (2) avoiding aversive social and/or evaluative situations at school, (3) getting attention from significant others and (4) getting tangible reinforces provided outside the school. The first and second types of school refusal behaviors are commonly associated with generalized anxiety disorder (Kearney & Albano, 2004; Kearney et al., 2005), while the second is associated with social anxiety disorder (Kearney & Albano, 2004). The third type is associated with separation anxiety disorder (Kearney & Albano, 2004; Kearney et al., 2005). As a final note, there has been a commitment to categorical and functional models mentioned above in recent years. In this perspective, (1) school refusal occurs when the young person refuses to attend school in relation to emotional distress that is indicative of aversion to attendance, (2) does not try to hide associated absence from their parents, (3) does not display severe antisocial behavior, and (4) the parents make reasonable efforts to secure attendance at school (Heyne et al., 2019).

1.2 | Anxiety

As an umbrella term, *anxiety* can be defined as 'an unpleasant emotional state or condition which is characterized by subjective feelings of tension, apprehension, and worry, and by activation or arousal of the autonomic nervous system' (Spielberger, 1972, p. 482). According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), anxiety disorders include disorders that share features of excessive fear, anxiety, and related behavioral disturbances. Anxiety is the anticipation of a future threat associated with muscle tension and vigilance in preparation for future danger and cautious or avoidant behaviors. *Trait anxiety* is a permanent personality disposition, so it is rather stable and predictable, whereas state anxiety is a temporary emotional condition that changes according to a perceived danger in a circumstance (Spielberger, 1972). In addition, *situation-specific anxiety* occurs in specific situations (Ellis, 1999). Third, *generalized anxiety* is mainly seen as a disorder characterized by uncontrollable, excessive, and irrational worry regarding activities and events, and with a more clinical explanation, and is associated with three or more of the following six symptoms with at least some symptoms present for more days than not for the past six months (American Psychiatric Association, 2013). Within this scope, *anticipatory anxiety*, as a symptom found in generalized anxiety, is felt by thinking about a situation or event in the future. Next, *school anxiety* is the worry experienced among children and adolescents while returning to, changing schools, or starting school, whereas *social anxiety* stems from fear of negative evaluation in performative situations (Leary & Kowalski, 1997). In addition, *parental anxiety* involves worrying about children (McClure et al., 2001). Last, *separation anxiety* is an emotional state experienced by children who feel worried about being separated from their parents (Santarossa et al., 2019).

1.3 | The overview of the study

As emphasized before, both school refusal and anxiety are considerable problems among children and adolescents. However, studies mainly focused on school refusal or anxiety, while a limited number of studies focused on how school refusal and anxiety related to each other. Similarly, review studies were also published on the mentioned variables. On the other hand, no review on the relationship between school refusal and anxiety has been conducted to holistically reveal the current research results. Thus, a research synthesis of the results obtained from prior research seems to seek an answer how school refusal and anxiety among children and adolescents. In this way, it will be possible to present pedagogical implications for target groups and recommendations for further research. With these concerns in mind, this study aims to seek an answer to the following question from the perspective of stakeholders such as teachers, parents, school counselors, administrators, policymakers, and, finally, educational researchers:

- What is the relationship between school refusal and anxiety?

2 | METHOD

2.1 | Research design

A systematic scoping review design was preferred in the current study due to several reasons. First, scoping reviews are helpful for synthesizing research evidence and categorizing the existed literature in a topic-based approach. Second, scoping reviews aim to identify the body of literature that has not been comprehensively reviewed. The findings can be categorized according to the labels such as participants, age groups, research designs, and outcomes. Moreover, they depend on both the quantity and quality of the literature regarding a broad research question. Third, scoping reviews may involve a comprehensive and multiple-structured search within the scope of the PRISMA model. Last, research synthesis for scoping reviews presents numerical summaries, descriptive forms, and qualitative and narrative thematic analysis (Grant & Booth, 2009; Peters et al., 2015). To conclude, the systematic scoping review design includes a specific methodology that locates prior studies, selects the relevant ones, evaluates their contributions to the related literature, analyses, and syntheses the data gathered. It is not a literature review from a traditional perspective since it differs in its principles and procedures (Harris et al., 2014). As the current study focuses on the relationship between school refusal and anxiety, the studies on the issue need to be identified and assessed for quality and quantity in a balanced summary. A comprehensive and methodical synthesis of research also seems necessary to answer the research question asked in the study, as it is necessary to synthesize and identify studies on the issue to provide evidence for recommendations for practice and future research (Denyer & Tranfield, 2009).

Within the scope of the systematic scoping review, the current study was designed for synthesizing research evidence on the relationship between school refusal and anxiety, categorizing the findings quantitatively and qualitatively under certain labels detailed below. The study also used the PRISMA model for the identification, screening, eligibility, and inclusion processes. Briefly, the current study depended on a research question, selected all relevant studies, collected data, and analyzed and synthesized the reviewed studies to provide evidence for recommendations for practice and future research.

TABLE 1 Inclusion and exclusion criteria

Category	Inclusion criteria	Exclusion criteria
Research design	Qualitative, experimental, correlational, descriptive, mixed-method	Thematic review, systematic review, meta-analysis
Publication types	Peer-reviewed research articles	Conference proceedings, working paper, dissertations, thesis

2.2 | Searching

Before the literature search, a pilot search was performed to gain an initial insight into the outputs of the database systems and develop appropriate inclusion and exclusion process. For this purpose, the keywords *school refusal* and *anxiety* in the database systems of Web of Science (WOS), Scopus, and Education Resources Information Center (ERIC) were used. Only peer-reviewed research articles in peer-reviewed journals were filtered to obtain quality regarding reliability and validity of the data presented (Voight & Hoogenboom, 2012). This initial screening process generated 97 articles that could meet the inclusion criteria. The publication year was not confined. This process was conducted in July 2020 and updated in August 2020.

2.3 | Inclusion and exclusion criteria

Two inclusion and exclusion criteria were established to identify relevant studies to the research question, as seen in Table 1. Included studies had to be designed as qualitative, experimental, correlational, descriptive, or mixed-method. In addition, studies designed as a thematic review, systematic review, and meta-analysis were excluded.

2.4 | Analysis

Statistical Package for the Social Sciences (SPSS) was used to code and analyze the studies. The sheet included 12 items that covered ten domains. These domains were author(s), publication years, journals, the numbers of participants, age and groups, mean scores for age, research designs, research techniques, tools, outcomes measured, and whether the studies were clinical and non-clinical (See Appendix A.1). All data in the studies were checked regarding validity and reliability.

Two researchers who were experienced and competent in the field were used for the measurement of interobserver agreement, a degree to which the observers report the same values after the same events in the analysis process. As suggested by Cooper et al. (2007), percentage agreement was preferred in the process. Then, the percentages were compared in a panel per measurement domain. For this purpose, values for each of the domains were compared in a panel. At the end of the process, it was observed that the data collected showed an excellent agreement in Cohen's kappa coefficient ($\kappa = 1$), a statistic used to measure interobserver reliability for categorical items (Viera & Garrett, 2005).

As indicated in Figure 1, the article selection process included the steps of identification, screening, eligibility, and inclusion. For this purpose, Web of Science (WOS), Scopus, and Education Resources Information Center (ERIC) were used to obtain research papers to review. As mentioned above, after a basic search including the keywords 'school refusal'

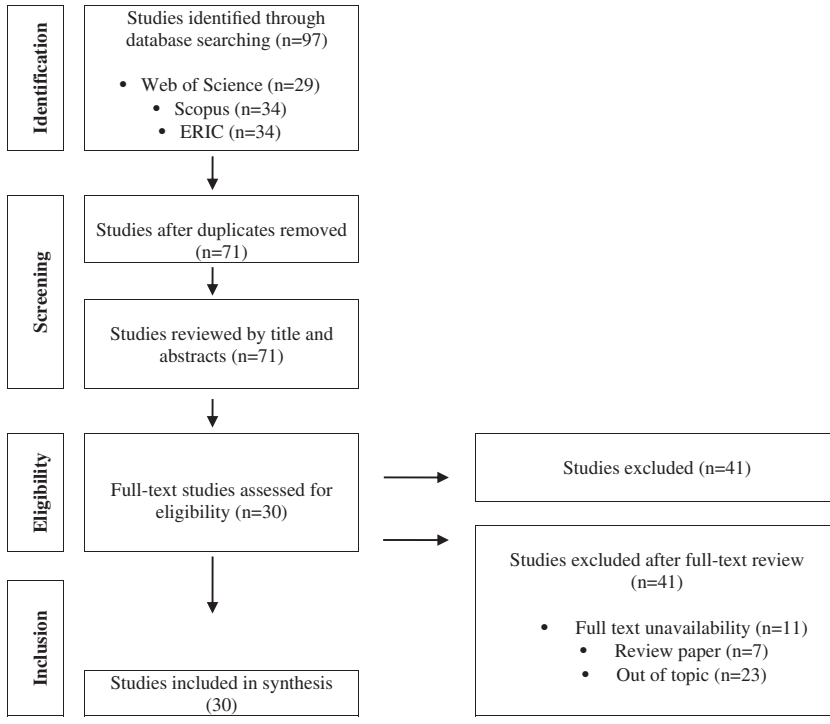

FIGURE 1 PRISMA flowchart for the inclusion process

and 'anxiety' regarding titles of the articles, abstracts, and keywords listed, 97 papers were accessed. After storing all of the papers, the second step included the exclusion process. It was screened that 26 papers were duplicated. In addition, 23 articles were found to be off-topic because they did not focus on the relationship between school refusal and anxiety; instead, they concentrated on either school refusal or anxiety. To add, the full texts of 11 articles could not be reached. In addition, after a reading process, seven review articles were excluded from the study. The study included 30 research papers focused on school refusal and anxiety at the final step.

3 | RESULTS

In this section, first, the findings on the analysis of the publications were presented. For this purpose, the quantitative analysis on publication years, journals, the numbers of participants, age groups, mean scores for age, research designs, research techniques, tools, and outcomes measured were given. Second, the review results of 30 studies are synthesized and presented in accordance with the outcomes measured in the articles reviewed within the scope of the systematic scoping review process. For this purpose, first, the results of the studies focused on the relationship between school refusal and state and trait anxiety were described. Then, after how social anxiety and school refusal relate, findings on school-related anxiety, fear, and school refusal were presented. Next, the results on the relationship between school punishment and school refusal were synthesized. Finally, after how family, separation anxiety, and depression were related to school refusal were given, findings on the physical effects of school refusal were noted.

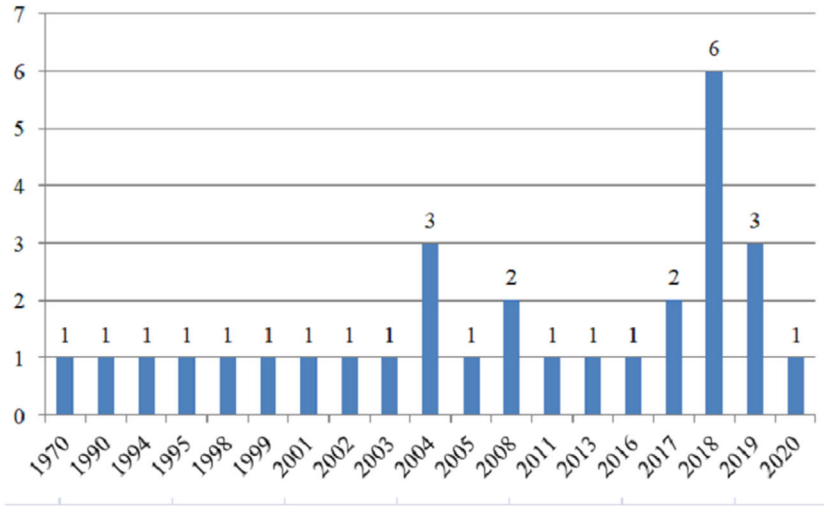

FIGURE 2 Publication years

3.1 | Analysis of the publications

As clarified in detail below, 27 of the articles were written in English, whereas one paper was in Spanish. In addition, one study in German and one article in French were among the papers reviewed. It should also be noted that papers in Spanish, German, and French had abstracts in English. The papers were published in 30 journals, whereas their publication period was between 1970 and 2020. The numbers of participants in the studies were within the range of one and 1842. The age groups of the participants were mainly children and adolescents, while two studies included parents. The studies were experimental, correlational, and descriptive, whereas one study used a qualitative research design. Fourteen of the studies (46.7%) were performed in clinical settings, while 16 (53.3%) were non-clinical studies. The studies also used cognitive-behavioral therapy, pharmacological treatment, and family therapy. The tools used and outcomes measured were school refusal and various anxiety types, as shown in Appendix A.1.

The research papers reviewed in the study were published between 1970 and 2020. Among the studies dealing with school refusal and anxiety, only nine were published before 2004. More specifically, no study was performed between 1970 and 1989, while only one study appeared each year from 1990 to 2003. Three articles were published in 2004, whereas two publications appeared in 2008. The remaining 10 articles appeared in 2018, 2019, and 2020, as shown in Figure 2.

The most administered data collection tools used in the studies reviewed were the original and revised forms of the School Refusal Assessment Scale. This scale was used in nine studies (29.03%), whereas the Children Depression Inventory was preferred in four studies (12.9%). The tools that were used twice were Child Behavior Checklist, clinical interviews, Screen for Child Anxiety-Related Emotional Disorders, Teacher Report Form, the Adult Separation Anxiety Questionnaire, the Fear Survey Schedule for Children, the Separation Anxiety Symptom Inventory, the State-Trait Anxiety Inventory, and the Visual Analogue Scale for Anxiety-Revised. The other scales, as indicated in Appendix A.1, were used once.

When the age of the participants was considered, it can be seen that participants in the studies were mainly children and adolescents, while parents were included in only two studies. The age range was found to be between five and 21. In terms of adults, the age was

within the range of 30 and 54, as indicated in Appendix A.1. The number of participants was within the range of one and 1842. Among these studies, the number of participants of seven studies was between one and five (22.6%), whereas 13 studies used participants between 19 and 95 (54.2%). In addition, the number of participants in the four studies was between 343 and 911 (12.9%), whereas five studies used more than 1000 participants (16.1%). When the age group was considered, 13 studies (43.3%) dealt with only children, while six used only adolescents (20%). On the other hand, both children and adolescents were used in six studies (20%), while only one study (3.3%) focused on parents. Last, three of the studies (10%) did not include information about age groups. Finally, the studies included participants from the USA ($n = 6$, 20%), France ($n = 5$, 16.7%), Spain ($n = 5$, 16.7%), Holland ($n = 3$, 10%), the UK ($n = 2$, 6.7%), Australia ($n = 2$, 6.7%), Italy ($n = 1$, 3.3%), Canada ($n = 1$, 3.3%), Ecuador, Austria, India, Japan and Turkey.

The most used research design was the experimental design ($n = 13$, 43.3%). Of the studies, 12 (40.0%) were correlational, while four (13.3%) studies were descriptive. As a final note, only one study was designed to be qualitative (3.3%). Regarding the treatment techniques, Cognitive-Behavioral Therapy was used in six studies (20.0%), whereas pharmacological treatment was used in three studies (10.0%). Other techniques used in the studies were family therapy (3.3%) and behavioral approaches (3.3%). Finally, the technique used was not specified in three studies (10.0%).

To a large extent, the variables studied were related to affective problems. Some studies focused on anxiety-based school refusal ($n = 7$, 23.3%), whereas the relationship between separation anxiety and school refusal behavior was handled in six studies (20.0%). Research also focused on the relationship between school refusal and different anxiety types such as school anxiety ($n = 3$, 10.0%), anticipatory anxiety, school-based anxiety, and generalized anxiety ($n = 2$, 6.7%).

3.2 | Research synthesis

According to the synthesis of the studies, school refusal and anxiety are directly and closely interrelated. First, in one of the earlier studies, King et al. (1999) performed a child cognitive-behavior therapy and parent/teacher training treatment and noted improvements in school attendance from 46.50% to 86.75%. In another research, Silove et al. (2002) found that patients who had histories of school refusal went on to develop anxiety, whereas a subgroup of adults with histories of school refusal exhibited a range of anxiety in adulthood. Sakuta et al. (2003) also concluded that high anxiety might result in symptoms with school refusal. Considering that the successful management of problems stemmed from school refusal and school attendance, Heyne et al. (2011) evaluated the acceptability and efficacy of cognitive-behavioral therapy regarding anxiety-based school refusal among adolescents. They found that the participants showed a significant decrease in anxiety. Fernández-Sogorb et al. (2018) noted that the low anxiety group presented the lowest means regarding school refusal dimensions, while the high anxiety group revealed the highest means in school refusal. Moreover, Gonzálvez et al. (2018a) identified different school refusal behavior profiles. The profiles obtained from the analysis were non-school refusal, school refusal by positive reinforcement, school refusal by negative reinforcement, and school refusal by mixed reinforcement. Non-school refusal group revealed the lowest scores, whereas the mixed reinforcement group revealed the highest scores on anxiety. Gonzálvez et al. (2018a) also analyzed the relationship between the revealed profiles and anxiety-provoking school situations. These profiles differed significantly based on the stated anxiety dimensions. Mixed reinforcement was the most severe one in terms

of anxiety. In a similar study underlining that negative emotional states such as depression, anxiety, and stress are prevalent in school refusal, Gonzálvez et al. (2018a) identified different profiles across four school refusal functions. They noted three school refusal profiles; non-school refusal behavior, school refusal behavior by tangible reinforcements, and school refusal behavior by multiple reinforcements. The multiple reinforcement group obtained the highest scores on the above-mentioned negative emotional states. In another study, Sibeoni et al. (2018) found that parents focused on external goals while adolescents focused their care on internal issues. They also noted that, for adolescents with persistent anxiety-based school refusal, self-transformation was possible with psychiatric care and space. Nayak et al. (2018) examined the sociodemographic profile and associated psychopathology among children with school refusal to analyze various risk factors and concluded that school refusal was associated with anxiety. Finally, in a recent study, Seçer and Ulaş (2020) pointed out that problematic attendance might be affected by social and adaptive functioning, anxiety sensitivity, and school refusal. Thus, they investigated the mediator role of academic resilience concerning school attachment, school refusal, social and adaptive functioning, and anxiety sensitivity. They found that academic resilience mediated the relationship between school attachment and anxiety sensitivity.

School refusal may relate to state and trait anxiety. Brandibas et al. (2004) noted two discriminant functions, stating that truancy was considered anxiety-related school refusal. The first one was represented by separation anxiety and school-related fears. The second was represented by trait and state anxiety and positively influenced avoidance of negative affectivity.

Social anxiety seems to be one of the primary functional conditions underlying school refusal. For instance, Last and Strauss (1990), after assessing the familial history of school refusal, found that school refusal was associated with social phobia. Albano et al. (2004) also found that social anxiety was the primary functional condition underlying school refusal. In another study, Zebdi and Lignier (2017) conducted a psycho-education program regarding the difference between pathological anxiety, anxiety during child growth, and normal anxiety. After the active phase of the therapy, the child developed positive thoughts against anxiety and fear. In addition, social interactions no longer constituted a problem. Finally, Gonzálvez et al. (2019) examined four school refusal behavior profiles; high, moderately high, moderately low, and non-school refusal behavior- were revealed. The high school refusal group obtained higher scores on social anxiety.

School-related anxiety and fear seem to be significant issues concerning school refusal, while only one study shows no difference between the two. For example, Overmeyer et al. (1995) compared school phobia and school refusal among patients and found no difference in outcome between the two groups. On the other hand, King et al. (1999) found that improvements in school attendance reduced anxiety and fear. Similarly, Brandibas et al. (2004) found that school-related fears influenced attentive-getting behavior, a function of school refusal. Heyne et al. (2011) also noted that, after a process of cognitive-behavioral therapy, the participants showed significant improvements in the school-related fear. Last, Maric et al. (2013) found that the use of cognitive-behavioral therapy effectively decreased fear about school attendance and increased school attendance.

School punishment may also be a predictor of school refusal. Gómez-Núñez et al. (2017) noted that school refusal was a predictor of anxiety about school punishment. Nevertheless, it should be noted that evidence regarding school punishment as a predictor of school refusal is limited to the finding of only one study.

Family may be considerable regarding school refusal and anxiety. Hypothesizing that school refusal was a variant of separation anxiety, Smith (1970) reviewed 63 cases and concluded that 17 cases experienced school phobia among 1000 school children per year,

whereas no gender difference was found. To add, IQ and family size were not found to be significant regarding school refusal with anxiety. In another study, Hansen et al. (1998) examined sociodemographic, clinical, and familial variables on children with anxiety-based school refusal. Older age and lower active-recreational family environments were significant predictors of school absenteeism. Buitelaar et al. (1994) assessed anxiety symptoms and psychiatric disorders among adolescents and found that school refusal was negatively correlated to small family size. Renaud et al. (2005) also pointed out that anxiety disorders in first-degree relatives of school refusers might play a considerable role in developing school refusal. Similarly, Gonzálvez et al. (2019) found that the non-school refusal behavior group obtained higher scores on good family functioning. Last, Marin et al. (2019) found that parental depression and family accommodation were significant predictors of school attendance difficulties.

Separation anxiety disorder may be a strong predictor of school refusal as well. As an example, Last and Strauss (1990), after assessing the familial history of school refusal, found that school refusal was associated with separation anxiety disorder. Brandibas et al. (2004) also noted that separation anxiety affected the attentive-getting behavior function of school refusal. Gosschalk (2004) used behavioral therapy for the treatment of a five-year-old girl with school refusal and separation anxiety. The patient's school refusal and separation anxiety symptoms were solved after the intervention. To add, Doobay (2008) proposed a treatment model based on cognitive-behavioral theory for school refusal caused by separation anxiety disorder. The counselor collaborated with parents and the school staff using cognitive-behavioral theory techniques such as relaxation, cognitive restructuring, and modeling. As a result of this intervention, school attendance improved, and separation anxiety was reduced. Karlovec et al. (2008) examined 10 children who were treated for separation anxiety disorder for ongoing school refusal. They noted that six patients were in partial remission, while three were fully remitted. Nevertheless, one patient had persistent separation anxiety disorder. They also stated that school refusal with separation anxiety increased the risk of developing subsequent mental disorders. Last, Zebdi and Lignier (2017) found that the child did not feel worried about going to school and separation after an active phase of the therapy mentioned.

School refusal may be correlated with depression and somatic complaints. For instance, Silove et al. (2002) found that patients continued depressive disorder with histories of school refusal. Similarly, Buitelaar et al. (1994) noted that school refusal was positively correlated to previous somatic complaints. Nayak et al. (2018) also pointed out that adjustment problems at school were a strong indicator of psychopathology and that school refusal was associated with depression. On the other hand, the results of the only study showed that there was no direct link between school absence and mental health problems. Considering that school absenteeism was a significant problem among adolescents and was linked to academic difficulties and mental problems, Gallé-Tessonneau et al. (2019) identified profiles of secondary school students regarding school absences and to see the relationships between their profiles and school refusal. Four profiles significantly differed on school absence, internalizing and externalizing problems, and function of absence. The results showed no direct link between school absence and higher levels of mental health problems.

School refusal may cause headaches. Within the scope, Galli et al. (2016) studied a school refusal case, a 10-year-old child with prolonged headache and separation anxiety. The patient and her family were involved in a family psychotherapy program for six months. They noted that headache attacks decreased, and school refusal was not a problem after family therapy intervention.

4 | CONCLUSIONS AND DISCUSSION

When the findings of the studies reviewed are taken into account, the following conclusions regarding school refusal and anxiety can be listed. First, high anxiety levels may result in school refusal symptoms among children and adolescents, whereas adults with histories of school refusal exhibit a range of anxiety. In other words, individuals with high anxiety may also suffer from school refusal. Anxiety seems a prevalent factor associated with school refusal. Second, school refusal seems related to state and trait anxiety, whereas social anxiety is associated with school refusal. Third, school-related anxiety and fear seem to be the predictors of school refusal, while one study shows no correlation between school anxiety and school refusal. In addition to school anxiety and fear, school punishment may also be a predictor of school refusal. The fourth conclusion is that individuals who experience school refusal are the youngest ones in the family, while the family size does not seem to be a predictor. In addition, no correlation is found between school refusal and IQ, while older age and lower active-recreational family environments are significant predictors. Moreover, bad family functioning and anxiety disorders in first-degree relatives of school refusal may play a considerable role in developing school refusal. Parental depression, parental anxiety, and family accommodation are other predictors of school refusal. Fifth, separation anxiety constitutes a strong predictor of school refusal. Within this scope, separation anxiety is a variable that affects the attentive-getting behavior function of school refusal and is a risk factor for children. Next, depression and somatic complaints positively correlate with school refusal, but no correlation exists between school refusal and mental health problems. As a final note, it should be stated that school refusal may cause headache attacks.

Several recommendations can be noted within the scope of the conclusions reached in the study. In a narrower sense, as intervention is effective for solving school refusal and separation anxiety symptoms (Gosschalk, 2004; Heyne et al., 2011), treatment and intervention programs should be applied to children, adolescents, and parents. In this way, it will be possible to reduce the levels of anxiety, depression, and fear and increase confidence in terms of separation from parents and handling problems about school refusal (King et al., 1999). It should also be recommended that cognitive-behavioral therapy can be preferred to treat persistent anxiety-based school refusal with psychiatric care and space (Doobay, 2008; Maric et al., 2013; Sibeoni et al., 2018). In addition, psychoeducation programs should be preferred to provide social interactions and reduce worries about school and separation (Zebdi & Lignier, 2017). Pharmacological methods also find a place in the literature as a treatment option (Albano et al., 2004; Fourneret et al., 2001). These methods may also be discussed as one available treatment option used in addition to therapeutic support under the guidance of a clinician. Moreover, preventative programs on school refusal and improving interactions with peers and family should be considered (Gonzálvez et al., 2018c; Hansen et al., 1998). Additionally, psycho-education programs aiming to improve students' skills such as emotion regulation, life skills development, and peer counseling may also be efficient preventative ways for anxiety and school refusal. As a final note, since first-degree relatives of school refusers may play an essential role in school refusal (King et al., 1999; Renaud et al., 2005), relatives are recommended to be included as a part of therapy, training programs, and treatments.

Some more recommendations for teachers, school counselors, and administrators can also be noted. In the broadest perspective, the target groups listed above should work in direct and close collaboration and cooperation to notice affective problems among students and guide them. For this, first, regular inventories should be administered to detect problems. Then, informative and intervention programs, seminars, individual counseling,

and group counseling programs in school settings should be organized to inform parents, first-degree relatives, teachers, and administrators about school refusal and various types of anxiety among students. Within this scope, school counselors need special attention and a vital role in designing preventive school refusal behavior programs that include strategies to regulate and reduce anxiety. The programs should include comprehensive information about the types of anxiety, sources of school refusal such as parental depression, family accommodation, parental anxiety, separation anxiety, and its adverse effects. In this way, target groups will raise their awareness of early symptoms in all age groups, intervention strategies and guide those who experience the mentioned affective problems for treatment, including cognitive-behavioral therapy, family therapy, and other convenient types of treatment. In other words, school counselors are recommended to develop and conduct preventive school refusal behavior programs including strategies to control and reduce anxiety in collaboration with clinicians. Second, teachers should provide positive educational environments, avoid punishments, and avoid comparisons to the students who suffer from the mentioned affective problems to other learners. Since cognitive-behavioral therapy suggests that they need encouragement in completing their tasks, family members and school staff should encourage the school refuser child in and out of the school. Third, school administrators should prepare plans and activities that include all stakeholders to make the school a 'safe place' for those who suffer from anxiety and school refusal. Within this perspective, they should be supportive of students, teachers, and counselors. In collaboration with teachers, they should keep track of the students who experience non-attendance problems to notice those who may have the potential of school refusal and anxiety in an early period. A final note can be added regarding educational policymakers and curriculum developers for teacher training programs. Topics such as school refusal and various types of anxiety should be implemented within in-service and pre-service teacher training programs to raise teachers' awareness of the mentioned problems.

Some recommendations for further research in terms of the conclusions of the study can be listed. In a general sense, as Marin et al. (2019) state, longitudinal studies with more diverse populations are warranted for a more in-depth and better understanding of the relationship between school refusal and anxiety. Further research should represent students with higher levels of school absence (Gallé-Tessonneau et al., 2019). In addition, the results of studies should be confirmed by other techniques such as controlled studies by adding various variables (Brandibas et al., 2004; Fourneret et al., 2001; Gosschalk, 2004; Gonzálvez et al., 2018a). As Sibeoni et al. (2018) and Maric et al. (2013) underline, further research should explore in-depth the experience of particular therapies on school refusers using qualitative research methods. In addition to qualitative studies, mixed-method approaches should be preferred for larger and various age groups and across various cultures (Gonzálvez et al., 2018b, 2018c; Heyne et al., 2011; Seçer & Ulaş, 2020). As a final recommendation, it can be pointed out that not only students but also parents, teachers, school counselors, and relatives should be considered participants in research activities by using various data collection tools such as diagnostic interviews, parent/teacher control lists, and school attendance records (Gonzálvez et al., 2019). Considering that the tools for collecting data are mainly confined to the School Refusal Assessment Scale and the Children Depression Inventory, further studies should use the Self-efficacy Questionnaire for School Situations, the School Refusal Personality Scale, the Assessing Reasons for School Non-Attendance, the School Refusal Evaluation Scale, the Inventory of School Attendance Problems, the Visual Analogue Scale for Anxiety, and the Screen for Child Anxiety Related Emotional Disorders in various samples and cultures (Gonzálvez et al., 2021). As a final point, since some conclusions obtained in the study are confined to a relatively limited number of studies, more research is warranted to provide a consensus.

As the recommendations for further research presented above are partly deduced from medical studies, some more suggestions within educational and cultural research contexts seem necessary. First and in the broadest sense, research on school refusal and anxiety is warranted in various educational contexts, as studies on the mentioned problems are too few to draw pedagogical conclusions. Thus, the problematic behaviors and demographic and educational variables that may relate to the mentioned problems should be investigated. These variables may consist of the predictors and risk factors of school refusal and anxiety in the educational context. Cross-cultural comparison studies should be performed to better understand school refusal and anxiety types in various cultural contexts. Second, as family functioning is directly related to school refusal (Gonzálvez et al., 2019), research should also focus on family members. Within the scope, issues such as problem-solving, communication skills, roles, affective responsiveness, affective involvement, and behavior control should be investigated in longitudinal studies. In this way, it may be possible to understand the long-term effects of school refusal on educational lives. Third, qualitative, descriptive, and correlational studies should be carried out to see various subtypes or profiles of school refusal and anxiety and to understand the correlations among the variables. The effectiveness of preventive school refusal programs based on various psychological approaches should also be examined using experimental research designs. Mixed-method studies are warranted to gain a more comprehensive perspective on school refusal and anxiety. As a final note, research should focus on the adaptation and development of data collection tools to be used for the measurement of school refusal and various anxiety types.

Some limitations of the study can be noted. First, the methodology of the study is limited to the systematic review design. Another limitation is that the study is limited to 30 studies published between 1970 and 2020 on the relationship between school refusal and anxiety. As another limitation, 11 articles could not be reviewed since the full texts were not reached. Moreover, the studies are confined to the sample groups consisting of children and adolescents rather than adults. The tools for collecting data are mainly limited to the School Refusal Assessment Scale and the Children Depression Inventory. The studies are also limited to experimental research in a clinical research context rather than research designs including qualitative, descriptive, correlational, and experimental studies in the educational research context. Last, the treatment approaches reported in the studies are mainly confined to Cognitive-Behavioral Therapy and pharmacological treatment.

CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

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APPENDIX

TABLE A.1 Summary of the studies

Number	Author(s)	Publication years	Journals	Numbers of participants	Nationality	Age intervals	Age groups	Mean scores for age	Clinical or non-clinical	Research design	Research techniques	Tools	Outcomes measured
1	Albano et al. (2004)	2004	European Neuropsychopharmacology	0	North American	8-17	Children and adolescents	N/A	Clinical	Experimental	Pharmacological Treatment	The School Refusal Assessment Scale (SRAS)	School refusal and school anxiety
2	Brandibas et al. (2004)	2004	School Psychology International	45	French	14-21	Adolescents	18,0	Non-clinical	Correlational	Discriminant Analysis	The School Refusal Assessment Scale (SRAS), The Separation Anxiety Symptom Inventory (SASI), State-Trait Anxiety Inventory (STAI-Y)	School refusal, different types of anxiety (separation anxiety, state-trait anxiety)
3	Buitelaar et al. (1994)	1994	Acta Paedopsychiatrica	25	Dutch	N/A	Adolescents	14,8	Clinical	Experimental	N/A	A Diagnostic And Statistical Manual Of Mental Disorders-III (DSM-III), Maudsley Symptom Checklist (MSC)	School refusal, anxiety, depression
4	Doobay (2008)	2008	Psychology in the Schools	1	North American	7	Children	7,0	Clinical	Experimental	Cognitive-Behavioral Therapy	N/A	School refusal behavior and separation anxiety disorder
5	Fernández-Sogorb et al. (2018)	2018	International Journal of Clinical and Health Psychology	911	Spanish	8-12	Children	9,6	Non-clinical	Correlational	Correlation	The Visual Analogue Scale for Anxiety-Revised (VAA-R), The School Refusal Assessment Scale-Revised for Children (SRAS-R-C)	School refusal, different types of anxiety (anticipatory anxiety, school-based anxiety, generalized anxiety)
6	Fourneret et al. (2001)	2001	L'Encephale	3	French	N/A	N/A	N/A	Clinical	Experimental	Pharmacological Treatment	Clinical observation	School refusal anxiety

(Continues)

TABLE A.1 (Continued)

Number	Author(s)	Publication years	Journals	Numbers of participants	Nationality	Age intervals	Age groups	Mean scores for age	Clinical or non-clinical	Research design	Research techniques	Tools	Outcomes measured
7	Gallé-Tessonneau et al. (2019)	2019	European Journal of Education and Psychology	469	French	10-16	Children and adolescents	12,1	Clinical	Correlational	Cluster Analysis	The School Refusal Assessment Scale (SRAS), The SChool REfusal EvaluatioN (SCREEN), The Bully/Victim Questionnaire revised (French Version) (OBVQ)	School refusal, school absenteeism, behavior problems, bullying
8	Galli et al. (2016)	2016	Headache in Children and Adolescents	1	Italian	10	Children	10,0	Clinical	Experimental	Family Therapy	Clinical interviews, Drawings, Children's Apperception Test (CAT)	School refusal, anxiety, headache
9	Gómez-Núñez et al. (2017)	2017	European Journal of Education and Psychology	1003	Spanish	8-12	Children	10,3	Non-clinical	Correlational	Regression Analysis	The School Anxiety Inventory for Primary Education (SIPE), The School Refusal Assessment Scale-Revised for Children (SRAS-R-C)	School refusal, school anxiety, school punishment
10	Gonzálvez et al. (2019)	2019	International Journal of Environmental Research and Public Health	18	Spanish	15-18	Adolescents	16,4	Non-clinical	Correlational	Cluster Analysis	The School Refusal Assessment Scale-Revised (SRAS-R), The Social Anxiety Scale for Adolescents (SAS-A), The Family APGAR Scale (APGAR: Adaptation, Partnership, Growth, Affection, and Resolve) (APGAR)	School refusal, social anxiety, family functioning
11	Gonzálvez et al. (2018a)	2018	Educational Psychology	1113	Spanish	8-11	Children	9,5	Non-clinical	Correlational	Cluster Analysis	The Visual Analogue Scale for Anxiety-Revised (VAA-R), The School Refusal Assessment Scale-Revised (SRAS-R)	School refusal, different types of anxiety (anticipatory anxiety, school-based anxiety, generalized anxiety)

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TABLE A.1 (Continued)

Number	Author(s)	Publication years	Journals	Numbers of participants	Nationality	Age intervals	Age groups	Mean scores for age	Clinical or non-clinical	Research design	Research techniques	Tools	Outcomes measured
12	González et al., 2018a	2018	International Journal of Educational Research	1113	Spanish	8-12	Children	9,5	Non-clinical	Correlational	Cluster Analysis	The School Refusal Assessment Scale-Revised (SRAS-R), School Anxiety Inventory for Children (SAI-C)	School refusal and school anxiety
13	González et al. (2018a)	2018	Psychiatry Research	11	Ecuadorian	8-11	Children	9,5	Non-clinical	Correlational	Cluster Analysis	The School Refusal Assessment Scale-Revised (SRASS-R), The Depression, Anxiety and Stress Scale-21 (DASS-21)	School refusal, anxiety, depression, stress
14	Gosschalk (2004)	2004	Education and Treatment of Children	1	North American	5	Children	5,0	Clinical	Experimental	Behavioral	The Devereux Behavior Rating Scales - School Form (DSF)	School refusal behavior and separation anxiety disorder
15	Hansen et al. (1998)	1998	Journal of Clinical Child Psychology	76	North American	N/A	Children	12,6	Non-clinical	Correlational	Regression Analysis	The Fear Survey Schedule for Children-Revised (FSSC-R), Modified State-Trait Anxiety Inventory for Children (STAIC-M), The Children Depression Inventory (CDI), The Family Environment Scale (FES)	Anxiety-based school refusal
16	Heyne et al. (2011)	2011	Journal of Anxiety Disorders	20	Dutch	11-17	Children and adolescents	14,6	Clinical	Experimental	Cognitive-Behavioral Therapy	The Multidimensional Anxiety Scale for Children (MASC/MASC-P), The Anxiety Disorders Interview Schedule for Children (ADIS-C/P)	Anxiety-based school refusal

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TABLE A.1 (Continued)

Number	Author(s)	Publication years	Journals	Numbers of participants	Nationality	Age intervals	Age groups	Mean scores for age	Clinical or non-clinical	Research design	Research techniques	Tools	Outcomes measured
17	Karlovec et al. (2008)	2008	Primary Care Companion to the Journal of Clinical Psychiatry	5	Austrian	9-14	Children and adolescents	12,7	Clinical	Experimental	Cognitive-Behavioral Therapy	The Diagnostic Interview for Mental Disorders in Children and Adolescents (DIMDCA)	School refusal behavior and separation anxiety disorder
18	King et al. (1999)	1999	Clinical Psychology & Psychotherapy	20	Australian	6-14	Children and adolescents	9,9	Clinical	Experimental	Cognitive-Behavioral Therapy	The Fear Survey Schedule for Children – II (FSSC-II), The Revised-Children's Manifest Anxiety Scale (R-CMAS), The Children Depression Inventory (CDI), The Self-Efficacy Questionnaire for School Situations (SEQSS), Teacher Report Form (TRF), The Global Assessment of Functioning Scale (GAF), The Anxiety Disorders Interview Schedule for Children (ADIS-C)	Anxiety-based school refusal
19	Last & Strauss (1990)	1990	Journal of the American Academy of Child & Adolescent Psychiatry	63	North American	N/A	N/A	N/A	Non-clinical	Descriptive	Descriptive Analysis	N/A	Anxiety-based school refusal
20	Maric et al. (2013)	2013	Behavioural and Cognitive Psychotherapy	19	Dutch	12-17	Adolescents	N/A[1]	Clinical	Experimental	Cognitive-Behavioral Therapy	N/A	School attendance, school-related fear, anxiety

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TABLE A.1 (Continued)

Number	Author(s)	Publication years	Journals	Numbers of participants	Nationality	Age intervals	Age groups	Mean scores for age	Clinical or non-clinical	Research design	Research techniques	Tools	Outcomes measured
21	Marin et al. (2019)	2019	European Journal of Developmental Psychology	343	North American	6-17 / 30–54	Children, adolescents, and parents	10,4	Non-clinical	Correlational	Regression Analysis	Anxiety Disorders Interview Schedule - Child and Parent Versions (ADIS-IV C/P), Family Accommodation Scale – Anxiety (FASA), Parenting Behavior Inventory (PRPBI), The Children Depression Inventory (CDI), Child Behavior Checklist (CBCL), Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI)	School refusal, anxiety, family accommodation, parental psychological control, parental anxiety, and parental depression
22	Nayak et al. (2018)	2018	The Indian Journal of Pediatrics	45	Indian	5-16	Children and adolescents	10,9	Non-clinical	Correlational	Regression Analysis	Clinical interviews	School refusal, depression, anxiety, academic difficulties, adjustment problems at school, parental conflicts
23	Overmeyer et al. (1995)	1995	Zeitschrift für Kinder-und Jugendpsychia-trie	26	British	N/A	Children	12,7	Clinical	Experimental	N/A	The Dimensional Assessment Scale of Functioning for Children and Adolescents (German Version) (MSBF)	School refusal and school anxiety
24	Renaud et al. (2005)	2005	Depression and Anxiety	95	Canadian	N/A	Children	13,2	Non-clinical	Descriptive	Descriptive Analysis	A Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV)	Anxiety-based school refusal
25	Sakuta et al. (2003)	2003	Brain and Development	19	Japanese	N/A	N/A	N/A	Clinical	Experimental	Pharmacological treatment	The State-Trait Anxiety Inventory (STAI)	Anxiety-based school refusal

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TABLE A.1 (Continued)

Number	Author(s)	Publication years	Journals	Numbers of participants	Nationality	Age intervals	Age groups	Mean scores for age	Clinical or non-clinical	Research design	Research techniques	Tools	Outcomes measured
26	Seçer & Ulaş (2020)	2020	Frontiers in Psychology	452	Turkish	13-18	Adolescents	15,1	Non-clinical	Correlational	The Structural Equation Model	The State-Trait Anxiety Inventory (STAI), The Social and Adaptive Functioning Scale (SAFS), The Academic Resilience Scale (ARS)	Academic resilience, anxiety, social and adaptive functioning, and school refusal
27	Sibeoni et al. (2018)	2018	Journal of the Canadian Academy of Child and Adolescent Psychiatry	20	French	12-18	Adolescents	N/A	Non-clinical	Qualitative	N/A	Case review	Anxiety-based school refusal
28	Silove et al. (2002)	2002	The Journal of Nervous and Mental Disease	72	Australian	N/A	Adults	45,0	Non-clinical	Descriptive	Descriptive Analysis	The Adult Separation Anxiety Semi-Structured Interview (ASA-SI), The Adult Separation Anxiety Questionnaire (ASA-27), The Separation Anxiety Symptom Inventory (SASI), The Structured Clinical Interview for DSM-IV (SCID-CV)	School refusal behavior and separation anxiety disorder
29	Smith (1970)	1970	Canadian Psychiatric Association Journal	63	British	6-16	Children and adolescents	N/A	Non-clinical	Descriptive	Descriptive Analysis	Semi-structured interviews	School refusal behavior and separation anxiety disorder

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TABLE A.1 (Continued)

Number	Author(s)	Publication years	Journals	Numbers of participants	Nationality	Age intervals	Age groups	Mean scores for age	Clinical or non-clinical	Research design	Research techniques	Tools	Outcomes measured
30	Zebdi & Lignier (2017)	2017	Journal de Thérapie Comportementale et Cognitive	1	French	7	Children	7,0	Clinical	Experimental	Cognitive-Behavioral Therapy	Screen for Child Anxiety-Related Emotional Disorders (SCARED), The Children Depression Inventory (CDI), The Schedule for Affective Disorders and Schizophrenia for School-Age-Children Present and Lifetime Version (Kiddie-SADS-PL), The Situations Émotions Cognitions Comportements Anticipations (SECCA)	School refusal behavior and separation anxiety disorder

[1]N/A: Not available.