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Registered report

Assessing school attendance problems: A critical systematic review of questionnaires



Carolina González^{a,*}, Christopher A. Kearney^b, María Vicent^a,
Ricardo Sanmartín^a

^a Department of Developmental Psychology and Teaching, University of Alicante, San Vicente del Raspeig, Spain

^b Department of Psychology, University of Nevada, Las Vegas, NV, USA

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ABSTRACT

Assessment methods for school attendance problems (SAPs) have burgeoned tremendously in recent years. This study involved a systematic review of questionnaires assessing SAPs. Literature searches up to November 2019 were conducted in four databases (Web of Science, Scopus, PsycINFO and ERIC). Nine instruments met the four selection criteria: (1) to assess SAPs, (2) in children and/or adolescents, (3) providing the psychometric properties and (4) be written in English or Spanish. Descriptive analysis (instrument's author/s and name, country, age addressed; response format; dimensions' names and items) and psychometric properties (internal consistency, temporal stability, factorial structure and construct validity) are presented for each instrument. Commentary is provided regarding the contributions of these instruments with respect to contemporary models of SAPs.

1. Introduction

School attendance problems (SAPs) refer to various types of absences involving a wide array of individual and contextual factors (Kearney, 2016). Examples of such absences include tardiness, skipping classes, and missing partial or full school days. SAPs are sometimes referred to in the literature as *truancy*, or illegal and unexcused school absenteeism; *school refusal*, or emotional difficulties associated with school attendance; *school withdrawal*, or absenteeism predominantly motivated by parent factors; and *school exclusion*, or absenteeism predominantly motivated by school factors (Heyne, Gren-Landell, Melvin, & Gentle-Genitty, 2019). SAPs are associated with substantial developmental problems with respect to academic and social skills, enhanced risk for later school dropout, and economic and psychiatric difficulties in adulthood (Kearney, González, Graczyk, & Fornander, 2019). The complexity and heterogeneity of SAPs thus requires sophisticated assessment approaches to fully capture the nuances of this population. No recent, detailed reviews of key assessment devices for SAPs are available, however.

Interviews, behavioral observations, and questionnaires are the primary evaluation methods for SAPs (Elliott & Place, 2019; Kearney & Albano, 2018). Interviews are used as an initial technique to explore frequency, intensity, and duration of SAPs and their connection to other problematic areas of functioning. Interviews of parents and youth with SAPs also include information about family structure, academic performance, and antecedents and consequences of the problems. For example, the Anxiety Disorders Interview

* Corresponding author at: University of Alicante, Department of Developmental Psychology and Teaching, University of Alicante, 03690 apdo. correos, 99, San Vicente del Raspeig (Alicante), Spain.

E-mail address: carolina.gonzalez@ua.es (C. González).

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Schedule for Children: DSM-IV (ADIS-C/P; Silverman & Albano, 1996) is a semi-structured interview that assesses anxiety disorders based on diagnostic criteria and includes a separate section on school refusal. Behavioral observations also constitute a direct method of recording behaviors based on acts conducted in a child’s natural environment. Behavioral observations for SAPs are typically focused on early morning behaviors prior to school as well as teacher reports of classroom and other school-based behavior during the academic day (King, Ollendick, & Tonge, 1995).

Questionnaires can also be used to evaluate SAPs and carry the advantages of brevity and ease of administration. Examples include the School Refusal Assessment Scale-Revised (SRAS-R; Kearney, 2002), Feelings of School Avoidance (FSA; Watanabe & Koishi, 2000), School Avoidance Scale (SAS; Fujigaki, 1996), and the School Refusal Personality Scale (SRPE; Honjo et al., 2003). The SRAS-R has

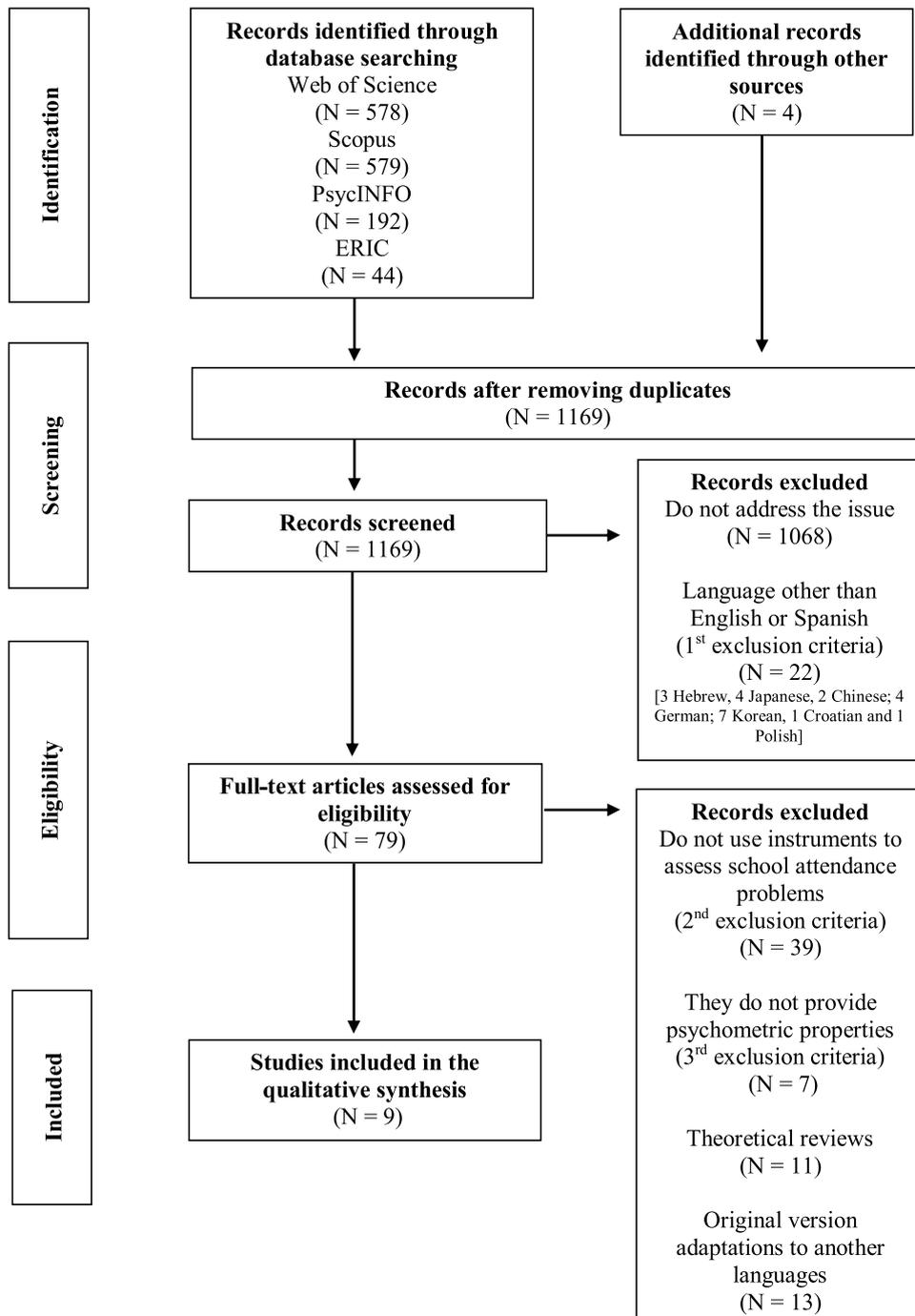


Fig. 1. PRISMA flow diagram illustrating the selection process of studies for inclusion in the systematic review.

Table 1
Questionnaires, inventories and scales to assess School Attendance Problems.

Specific instruments to assess School Attendance Problems							
Author(s) - Country	Measure	Age	Participants and socio-economic context	Items	Response format	Dimensions	Items' example
Heyne et al. (1998) (Country not mentioned)	Self-efficacy Questionnaire for School Situations (SEQ-SS)	5–15	Clinical sample All socioeconomic categories were represented	12	5-point Likert Really sure I couldn't (1) Really sure I could (5)	(1) Academic/Social Stress (2) Separation/Discipline Stress	(1) How sure are you being able to do tests? (2) How sure are you that you could cope with being away from your mother or father during school-time?
Kearney (2002) USA	School Refusal Assessment Scale-Revised (SRAS-R)	8–17	Clinical sample Socio-economic context data is unavailable	24	7-point Likert Never (0) Always (6)	(1) Avoidance of negative affectivity-provoking objects or situations related to school setting (2) Escape from aversive social or evaluative situations (3) Attention-getting behavior (4) Positive tangible reinforcement	(1) How much more do you have bad feelings about school (e.g., scared, nervous, sad) compared to other kids your age? (2) How often do you stay away from people in school compared to other kids your age? (3) Would you like to be home with your parents more than other kids your age would? (4) Would you rather be doing fun things outside of school more than most kids your age?
Honjo et al. (2003) Japan	School Refusal Personality Scale (SRPS)	12–18	Community sample Socio-economic context data is unavailable	22	3-point Likert Yes (3) No (1)	(1) Obsessive-compulsive (2) Passive-unsocial (3) Socially introverted	(1) I am rather perfectionistic about what I do (2) I don't have a large number of friends (3) I worry about how others think of me
Havik et al. (2015) Norway	Assessing Reasons for School Non-Attendance (ARSNA)	11–15	Community sample The municipalities included a relatively large Norwegian city, towns, and rural districts	17	4-point Likert Never (0) Quite often (3)	(1) Somatic symptoms (2) Subjective health complaints (3) Truancy (4) School refusal	(1) How often have you been absent from school in last three months because you had a bad cold or flu? (2) How often have you been absent from school in last three months because you had a headache? (3) How often have you been absent from school in last three months because you had arranged to be with friends? (4) How often have you been absent from school in last three months because you

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Table 1 (continued)

Specific instruments to assess School Attendance Problems							
Author(s) - Country	Measure	Age	Participants and socio-economic context	Items	Response format	Dimensions	Items' example
Gallé-Tessonneau and Gana (2018) France	School Refusal Evaluation Scale (SCREEN)	10–16	Clinical sample Community sample Socioprofessional categories of fathers in the community sample: middle (42 %) and upper (31 %) classes (1 % retirement, 6 % unemployment, 7 % labourer, and 13 % unknown)	18	5-point Likert Not at all like me (1) Much like me (5)	(1) Anxious anticipation (2) Difficult transition (3) Interpersonal discomfort (4) School avoidance	were afraid or worried about something at school? (1) I can't explain why I can't go to school (2) In the morning, I don't want to go to school (3) I'm afraid of what others in my class think of me (4) I often go to the school infirmary or administration office because I don't feel well
Knollmann et al. (2019) Germany	Inventory of School Attendance Problems (ISAP)	8–19	Clinical sample Socio-economic context data is unavailable	48	4-point Likert Never Sometimes Often Most of the time	(1) Depression (2) Social Anxiety (3) Performance Anxiety (4) Agoraphobia/Panic (5) Separation Anxiety (6) Somatic Complaints (7) Aggression (8) School Aversion /Attractive Alternatives (9) Problems with Teachers (10) Dislike of the Specific School (11) Problems with Peers (12) Problems Within the Family (13) Problems with Parents	(1) I am sad (2) I worry that I might embarrass myself (3) I am afraid of exams (4) Agoraphobia/Panic (5) I miss my parents (6) I feel sick (7) I get aggressive fast (8) I think I am not interested in school (9) I think that one or more of my teachers are against me (10) I don't like my school (11) I feel excluded by my classmates (12) I must think about problems or incidents in my family (13) I feel rejected by my parents
Instruments with some items or a subscale that measure School Attendance Problems							
Author(s) - Country	Measure	Age	Participants and socio-economic context	Items	Response format	Dimensions	Items' example
Bernstein and Garfinkel (1992) USA	Visual Analogue Scale for Anxiety - Revised (VAA-R)	8-19	Clinical sample Community sample Lower socio-economic status families: 43.7 % in the clinical sample	11	Each item is scored by measuring in centimeters from "steady" to "jittery nervous" and child's mark on the line.	(1) Anticipatory/separation anxiety (2) Performance anxiety (3) Affective response to anxiety	(1) Starting the school in the fall (2) Being call on by the teacher (3) How I feel most of the time
Muris et al. (1999) Netherlands	Screen for Child Anxiety Related Emotional Disorders-	8–18	Community sample Socio-economic	66	3-point Likert Almost never (0) Often (2)	(1) Panic disorder (2) Generalized anxiety disorder	(1) When frightened, it is hard to breathe

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Table 1 (continued)

Instruments with some items or a subscale that measure School Attendance Problems							
Author(s) - Country	Measure	Age	Participants and socio-economic context	Items	Response format	Dimensions	Items' example
	Revised (SCARED-R)		context data is unavailable			(3) Separation anxiety disorder (including school phobia) (4) Social phobia (5) Specific phobia (animal phobia) (6) Specific phobia (situational environ-mental phobia) (7) Specific phobia (Blood-injection-injury phobia) (8) Obsessive-compulsive disorder (9) Traumatic stress disorder	(2) I worry about others not liking me (3) I get scared when I sleep away from home (4) I don't like to be with people I don't know (5) I am afraid of an animal that is not really dangerous (6) I am afraid of heights (7) I am afraid to visit the dentist (8) I want that things are in a fixed order (9) I try not to think about a very aversive event I once experienced
García-Fernández and Inglés (2017) Spain	School Anxiety Inventory-Short Version (SAI-SV)	12–18	Community sample Rural and urban areas were represented	15 items relating to school situations and 15 items related to three responses systems of anxiety (5 cognitive, 5 behavioral and 5 Physiological)	5-point Likert Never (0) Always (4)	School situations (1) Anxiety about Aggression (2) Anxiety about Social Evaluation (3) Anxiety about Academic Failure Response systems of anxiety (1) Cognitive Anxiety (2) Physiological Anxiety (3) (3) Behavioral Anxiety	School situations (1) If I am insulted or threatened (2) If I ask the teacher in class (3) If I get bad marks Response systems of anxiety (1) It frightens me and it makes me nervous (2) My heart beats quickly (3) (3) My voice trembles

been a key self-report measure widely used outside the United States, where it was initially developed (Kearney & Silverman, 1993). The SRAS-R is a self-report measure that facilitates a functional assessment of school refusal behavior, identifying maintaining factors. There are two versions of the SRAS-R, a child report and a parent report. For years this scale was one of the few instruments available that specifically measured SAPs. However, in the last five years, new instruments have been proposed, thus requiring a systematic review that includes latest advances in this field.

Screening instruments such as questionnaires for SAPs are gaining prominence as well because multi-tiered approaches for these problems are becoming more widespread. This necessitates the development of instruments, for example, that can help distinguish between Tier 1 nonproblematic school attendance and Tier 2 problematic absenteeism (Kearney, González, Graczyk, & Fornander, 2019). Such distinction will require instruments that include multi-source and multi-method assessment (Kearney, Chapman, & Cook, 2005). The purpose of this study was to conduct a critical systematic review of current screening questionnaires for SAPs, with a

Table 2
Internal structure and reliability of questionnaires, inventories and scales of School Attendance Problems.

Instrument	Rotation	Variance	Selection of items	Reliability	Test-retest
Self-efficacy Questionnaire for School Situations (SEQ-SS)	Varimax	(1) 38.7 % (2) 14.7 %	All items loaded at the 0.4 level or above on only one of the two factors	Alpha Cronbach (1) .81 (2) .81 Total .85	6-11 days later (1) .79 (2) .91
School Refusal Assessment Scale-Revised (SRAS-R)	Rotated Factor Matrix Loadings	47.9 % (Three factors version)	—	—	days later (SRAS-R for children) (1) .64 (2) .73 (3) .78 (4) .56 7-14 days later (SRAS-R for parents) (1) .63 (2) .67 (3) .78 (4) .61
School Refusal Personality Scale (SRPS)	Varimax	(1) 18.7 % (2) 12.2 % (3) 10.4 %	—	Alpha Cronbach (1) .81 (2) .67 (3) .66	—
Assessing Reasons for School Non-Attendance (ARSNA)	—	—	—	Alpha Cronbach (1) .72 (2) .83 (3) .85 (4) .85	—
School Refusal Evaluation Scale (SCREEN)	Oblique	(1) 16 % (2) 11 % (3) 9 % (4) 8 %	Factor loading >.40 and at least a difference of .20 when cross-loadings among factors occurred	Composite Reliability Index (1) .80 (2) .77 (3) .70 (4) .70 (5) Total: .92	—
Inventory of School Attendance Problems (ISAP)	Varimax	—	—	Alpha Cronbach (1) .86 (2) .86 (3) .87 (4) .75 (5) .85 (6) .82 (7) .88 (8) .81 (9) .81 (10) .85 (11) .83 (12) .88 (13) .85	—
Visual Analogue Scale for Anxiety - Revised (VAA-R)	Varimax	(1) 35.4 % (2) 12.5 % (3) 10.7 %	—	Alpha Cronbach Clinical sample: .80 Community sample: .78	days later Total anxiety score: .87
Screen for Child Anxiety Related Emotional Disorders-Revised (SCARED-R)	Oblimin	1-factor solution accounting for 20.5 % of the variance-	—	Alpha Cronbach (1) .80 (2) .79 (3) .71 (4) .70 (5) .74 (6) .64 (7) .68 (8) .70 (9) .80	—

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Table 2 (continued)

Instrument	Rotation	Variance	Selection of items	Reliability	Test-retest
School Anxiety Inventory-Short Version (SAI-SV)	Promax	School situations (1) 52.23 % (2) 13.29 % (3) 10.37 % Response systems of anxiety (1) 56.32 % (2) 58.10 % (3) 47.06 %	—	Alpha Cronbach School situations (1) .94 (2) .91 (3) .89 Response systems of anxiety (1) .85 (2) .84 (3) .77	14 days School situations (1) .87 (2) .85 (3) .83 Response systems of anxiety (1) .76 (2) .78 (3) .74

particular focus on a descriptive and psychometric analysis of the scales.

2. Method

2.1. Study search and selection process

The following criteria were considered for study selection: 1) written in English or Spanish; 2) proposed a measure to assess school attendance problems; 3) described the psychometric properties of the instrument; and 4) targeted a child or adolescent sample (from 5 years of age up to 19 years of age). A literature search was carried out in four databases (Web of Science, Scopus, PsycINFO, and ERIC), conducting a manual search of the bibliography of selected articles and contacting with leading authors. The search strategy used was ("school refusal" or "school absenteeism" or "truancy") and ("questionnaire" or "scale" or "inventory") and ("child*" or "adolescen*" or "youth"). These terms were included in the four databases without establishing a time limit in the search period and collecting all type works up to November 2019. It is expected that publication bias, usually defined as the tendency from authors to publish studies with significant results, is reduced by expanding the literature search routes (e.g. databases, bibliography and authors contact), considering not only impact factor journals and collecting publications without restrictions according to the type of document. In Web of Science and in Scopus the search was limited to the fields of title, abstract, and keywords, whereas in PsycINFO and ERIC the search was limited to the abstract. Of 1393 total documents, 224 were eliminated as duplicates and 1159 were eliminated for not meeting selection criteria (Fig. 1). In some cases, it was necessary to review the original documents because the abstract did not provide sufficient data to establish whether the study met inclusion criteria. Once selected, bibliographic references were reviewed to determine if any other document should be considered.

In the selection process, the following instruments were rejected because they did not provide sufficient psychometric information: the School Non-Attendance Checklist (SNACK, Heyne et al., 2019), an instrument to examine types of SAPs; and the Adolescent Truancy Scale (ATS; Adika, 2016), an instrument focused on best ways to manage school attendance (Reid, 2007a, 2007b). In addition, the following instruments were rejected due to difficulties accessing the full text validation study: the Feelings of School Avoidance (FSA; Watanabe & Koishi, 2000) and the School Avoidance Scale (SAS, Fujigaki, 1996). Nine works met all selection criteria.

2.2. Data extraction and design

Data extracted from each study are in Tables 1–3. Table 1 includes descriptive data regarding the characteristics of each instrument (author or authors of the instruments and country in which the validation study had been conducted; name of the instrument; age at which SAPs is addressed; number of items; response format; name of the dimension or dimensions that comprise the instrument; examples of items). Table 2 presents data regarding factor analysis used in each study (type of factor analysis, rotation, variance, selection of items, reliability). Table 3 indicates other approaches regarding the construct validity of the reviewed instruments (convergent validity, divergent validity and other evaluation instruments used in the study).

Data extraction was conducted by two authors implementing the inter-rater reliability after completing their work. This statistic provides the degree of agreement among raters estimating how much consensus exists in the ratings given by different judges. Concordance between the two researchers was analyzed using Cohen's kappa coefficient, with a value of .94. Cases of disagreement were discussed until agreement was reached.

3. Results

Nine instruments were selected for analysis. The characteristics that define each of these measures are presented below. The order of presentation was based on two conditions: (1) specific instruments for youths with SAPs are presented prior to instruments that measure SAPs in some items or via subscale; and (2) older studies are presented prior to newer studies.

Table 3
Construct validity of the questionnaires, inventories and scales of School Attendance Problems.

Instrument	Factorial Analysis	Construct validity			Other procedures of assessment	Differences between groups
		Convergent validity (Similar instruments)	Convergent validity (Related constructs)	Divergent validity (Independent constructs)		
Self-efficacy Questionnaire for School Situations (SEQ-SS)	Principal components factorial analysis	—	—	—	—	—
School Refusal Assessment Scale-Revised (SRAS-R)	Principal components factorial analysis	Correlations between SRAS (Kearney & Silverman, 1993) and SRAS-R (Kearney, 2002) Fear Survey Schedule for Children-Revised (FSSC-R; Ollendick, 1983) Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) State-Trait Anxiety Inventory for Children (STAIC, Spielberger, 1973) School Avoidance Scale (SAS; Fujigaki, 1996)	Social Anxiety Scale for Children (SASC; La Greca, Dandes, Wick, Shaw, & Stone, 1988) Children's Depression Inventory (CDI, Kovacs & Beck, 1977)	Anxiety Disorders Interview Schedule for Children-Child and Parent Versions (ADIS-C/P; Silverman & Albano, 1996)	Parents completed: (CBCL; Achenbach, 1991a), SRAS-R-P (Kearney, 2002). Teachers completed: (TRF; Achenbach, 1991b)	—
School Refusal Personality Scale (SRPS)	Principal components factorial analysis	—	Children's Depression Inventory (CDI; Kovacs, 1983)	—	—	—
Assessing Reasons for School Non-Attendance (ARSNA)	Confirmatory Factor Analyses	—	—	—	—	—
School Refusal Evaluation Scale (SCREEN)	Exploratory Factor Analysis Confirmatory Factor Analyses	The Screen for Child Anxiety Related Emotional Disorders-R. Only the "school phobia" dimension (four items) (SCARED-R; Muris et al., 1999). The School Refusal Assessment Scale (SRAS; Kearney & Silverman, 1993) The Child Behavior Checklist-Youth Self-Report (CBCL-YSR; Achenbach, 1991a).	—	—	—	Clinical and non-clinical participants
Inventory of School Attendance Problems (ISAP)	Principal components factorial analysis	German version of the School Refusal Assessment Scale (ESV-R; Knollmann et al., 2017).	German version of the Youth Self Report (YSR; Dopfner et al., 1995).	—	—	—
Visual Analogue Scale for Anxiety - Revised (VAA-R)	Principal components factorial analysis	Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) State-Trait Anxiety Inventory for Children (STAIC, Spielberger, 1973) Anxiety Rating Scale for Children (ARC) (Erbaugh, 1984)	Children's Depression Rating Scale-Revised (CDR-R; Poznanski et al., 1985) Children's Depression Inventory (CDI; Kovacs & Beck, 1977) Children's Depression Scale (CDS; Lang & Tisher, 1978)	—	—	Clinical and non-clinical participants
Screen for Child Anxiety Related Emotional	Exploratory and confirmatory factor analyses (principal	—	—	—	—	—

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Table 3 (continued)

Instrument	Factorial Analysis	Construct validity			Other procedures of assessment	Differences between groups
		Convergent validity (Similar instruments)	Convergent validity (Related constructs)	Divergent validity (Independent constructs)		
Disorders-Revised (SCARED-R)	components) were carried out on parts of the SCARED-R					
School Anxiety Inventory-Short Version (SAI-SV)	Principal axis factoring Confirmatory factor analysis	—	—	—	—	—

3.1. Specific instruments for youth with SAPs

3.1.1. Self-efficacy Questionnaire for School Situations (SEQ-SS; Heyne et al., 1998)

The SEQ-SS measures students' self-efficacy expectations for problematic school-related situations. This instrument contains 12 commonly encountered school situations that are rated by degree of belief about one's ability to cope with each situation. Each item is answered along a 5-point Likert scale regarding self-efficacy expectancies (from 1 "really sure I couldn't" to 5 "really sure I could"). This questionnaire purportedly measures two factors: Academic/Social Stress and Separation/Discipline Stress. The psychometric properties were analyzed with 135 school refusers ($M_{age} = 11.4$; $SD = 2.4$) that revealed good internal consistency and test-retest reliability (Table 2). This questionnaire was used with a clinical sample of children between 5–15 years old and higher scores reflect greater self-efficacy expectations.

This original version was expanded to the 25-item SEQ-SS (SEQ-SS-25; Heyne et al., 2007) that added 13 items pertinent to interaction with peers, school staff, and parents. However, this version is an unpublished measure. Ng, Heyne, Cheng and Husain (2019) recently published the Malay version of the SEQ-SS. The Malay version comprised 19 items, revealed a four-factor solution ('Self-efficacy in socially challenging situations', 'Self-efficacy in personally challenging situations', 'Self-efficacy in separation situations', and 'Self-efficacy in situations of disengagement from school'), and displayed overall internal consistency (.82) but lower Cronbach's alpha values for the subscales (.64–.69).

3.1.2. School Refusal Assessment Scale-Revised (SRAS-R; Kearney, 2002)

The SRAS-R is a 24-item self-report measure to assess the relative strength of four functional conditions that maintain school refusal behavior: (1) avoid school-related stimuli that provoke a sense of negative affectivity; (2) escape from aversive social and/or evaluative situations at school; (3) pursue attention from significant others; (4) pursue tangible reinforcement outside of school. This instrument is a revision of the original 16-item scale (Kearney & Silverman, 1993). In the revised version, new items were added, for a total of 24 items, and the wording of some existing ones was modified. The scale is used for those aged 8–17 years with a 7-point response scale (0 = never; 6 = always). The scores in the four functional conditions are derived by summing the scores for the 6 items that correspond with each of the four dimensions. The highest score needed to have been at least 0.25 points higher than any other functional condition, a criterion also used for the original scale.

Confirmatory factor analysis among a clinical sample of 213 young Americans ($M_{age} = 13.9$; $SD = 1.9$) indicated that the four-factor structure was supported with the exception of items 20 and 24 (Kearney, 2002). Reliability and validity analyses demonstrated adequate internal consistency. Likewise, test-retest reliability (1–2-week) coefficients were also satisfactory (Table 2). The use of the SRAS-R to determine the causes that maintain school refusal behavior is useful for designing prescriptive interventions according to specific functions. A revised equivalent version for parents (SRAS-R-P, Kearney, 2002) and one for teachers of the original scale (Kearney & Silverman, 1993) are also available. The SRAS-R has been validated in numerous countries in studies reporting adequate internal consistency indices, albeit with some changes such as item omission, wording change, or a three-dimensional factor structure instead of four (Spain, González et al., 2016; Chile, González et al., 2017; Ecuador, González, Inglés et al., 2018; Germany, Knollmann, Sicking, Hebebrand, & Reissner, 2017; Walter, von Bialy, von Wirth, & Doepfner, 2017; Netherlands, Heyne, Vreeke, Maric, Boelens, & Van Widenfelt, 2016; United Kingdom, Richards & Hadwin, 2011; Turkey, Seçer, 2014; United States, Haight, Kearney, Hendron, & Schafer, 2011; Kearney, 2006; Lyon, 2010).

3.1.3. School Refusal Personality Scale (SRPS; Honjo et al., 2003)

The SRPS is a self-report measure that assesses personality tendencies of school refusers. The scale consists of 22 items with a 3-point Likert-type scale (1= no; 2= neither yes or no; 3= no). Factor analysis via principal factor solution and varimax rotation revealed a three-factor structure: (1) Obsessive-compulsive, (2) Passive-unsocial, and (3) Socially introverted.

Psychometric properties of the SRPS were examined with a community sample of 425 Japanese students aged between 12–18 years old. Adequate internal consistency coefficients for all SRPS scores were evident (Table 2). Validity correlations with other measures, the Children's Depression Inventory (CDI; Kovacs, 1992) and the School Avoidance Scale (SAS; Fujigaki, 1996), revealed only low correlations between the SRPS and the SAS. Specifically, the Passive-unsocial and the Socially-introverted factors were positively correlated with School avoidance and School dislike SAS dimensions, but negatively correlated with the Obsessive-compulsive factor

(Table 3). However, no further studies have applied this instrument or analyzed its psychometric properties in other populations.

3.1.4. Assessing Reasons for School Non-attendance (Havik, Bru, & Estesvåg, 2015)

This is a 17-item self-report questionnaire to assess reasons for school non-attendance. All items have four response alternatives (0= never; 3= quite often). The questionnaire also includes an item about number of full days absent in the last three months, which has five response alternatives: none, 1–4 days, 5–7 days, 8–10 days, and more than 10 days (scored 0–4). In addition, information about gender, grade, and self-reported special educational needs is included. Four types of school non-attendance reasons were proposed: (1) somatic symptoms; (2) subjective health complaints; (3) truancy-related; and (4) school refusal. Reliability and validity analyses of this questionnaire were conducted on a community sample of 3629 Norwegian students aged 11–15 years. Good fit indices via confirmatory factor analysis were revealed for the four types of reasons for school non-attendance (Table 2). No studies have yet applied this instrument to other populations.

3.1.5. School Refusal Evaluation Scale for Adolescents (SCREEN, Gallé-Tessonneau & Gana, 2019)

The SCREEN is an 18-item multidimensional self-report measure of school refusal utilizing a 5-point Likert scale ranging from 1 (not at all like me) to 5 (much like me). This scale is for adolescents aged 11–16 years and higher scores indicate severe school refusal. The SCREEN presents a four-factor model structure: (1) Anxious anticipation, or anxiety of school attendance and fear of being confronted by the school; (2) Difficult transition, or adolescent–parent relationships in school refusal; (3) Interpersonal discomfort, or interpersonal relationship difficulties at school and the impact of these difficulties on self-perception; and (4) School avoidance, or avoidance of school because of difficulties coping with emotional distress and failure to self-regulate.

The psychometric properties of the SCREEN were examined in a community sample of 624 French adolescents aged 10–16 years ($M_{age} = 12.4$; $SD = 1.3$) and in a clinical sample of 31 French adolescents aged 10–16 years ($M_{age} = 13.3$; $SD = 1.5$) with school refusal. The reliability of the SCREEN via the Composite Reliability Index (CRI) was good (Table 2). Validity correlations revealed that SCREEN total scores correlated with both the SRAS (Kearney & Silverman, 1993) and with school phobia as assessed via the SCARED (Muris, Merckelbach, Schmidt, & Mayer, 1999) (Table 3). However, no further studies have yet analyzed its psychometric properties in other populations.

3.1.6. Inventory of School Attendance Problems (ISAP; Knollmann, Reismner, & Hebebrand, 2019)

The ISAP is a 48-item self-report measure that assesses the presence and function of symptoms associated with SAPs. Based on factor analyses, 13 distinct subscales were identified that assess internalizing and externalizing symptoms (Depression, Social Anxiety, Performance Anxiety, Agoraphobia/Panic, Separation Anxiety, Somatic Complaints, Aggression, School Aversion/Attractive Alternatives) as well as emotional distress due to problems in the school or family context (Problems with Teachers, Dislike of the Specific School, Problems with Peers, Problems Within the Family and Problems with Parents).

All subscales displayed good internal consistencies based on a clinical sample of 245 German students with SAPs ($M_{age} = 14.4$; $SD = 2.3$) (Table 2). In addition, construct validity was determined via correlations between the ISAP and the German versions of the Youth Self Report (YSR; Dopfner, Berner, & Lehmkuhl, 1995), the School Refusal Assessment Scale (SRAS, Kearney & Silverman, 1993), and the extent of school absenteeism (Table 3). Findings supported ISAP utility for a comprehensive assessment of SAPs in clinical settings. However, further studies on the psychometric properties of the ISAP are needed in other populations.

3.2. Instruments that assess SAPs in some items or subscale

3.2.1. Visual Analogue Scale for Anxiety-Revised (VAA-R; Bernstein & Garfinkel, 1992)

The VAA-R assesses anxiety in children with school refusal and identifies school situations that generate anxiety, such as being called by the teacher, riding the school bus, or thinking about going to school on Monday. The VAA-R consists of 11 situations, 8 related to school of which three refer to somatic reactions (having difficulty breathing, high heart rate, and dizziness) and two that assess how the student feels at that time as well as frequency. The original version of the scale (VAAS; Visual Analogue Scale for Anxiety; Garfinkel, Bernstein, & Erbaugh, 1984) featured two unisex faces (nervous vs. calm), where one could mark degree of anxiety (0 = calm; 10 = nervous). The total score is obtained by summing the scores from individual items and dividing by 11 which is the total number of items.

The 11 items selected by Bernstein and Garfinkel were those that, in a set of 40, correlated best with the Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1978) and State-Trait Anxiety Inventory for Children (STAIC; Spielberg, 1973). Reliability and validity analyses were conducted on a clinical sample of 86 American students aged 8–17 years with school refusal and a community sample of 918 students aged 14–19 years. Test-retest reliability and validity indices were adequate (Table 2). The validity of the VAA-R was supported by significant correlations with other anxiety measures such as the RCMAS, STAIC, Anxiety Rating Scale for Children (ARC; Erbaugh, 1984, unpublished instrument) and depression, Children's Depression Rating Scale-Revised (CDRS-R; Poznanski, Freeman, & Mokros, 1985), Children's Depression Inventory (CDI; Kovacs, 1992), and the Children's Depression Scale (CDA, Lang & Tisher, 1978). An electronic version of the VAAS was also validated (eVVAS, Electronic Visual Analogue Scale of Anxiety; Van Duinen, Rickelt, & Griez, 2008) and extended to a Spanish sample (Fernández-Sogorb et al., 2018).

3.2.2. Screen for Child Anxiety Related Emotional Disorders-Revised (SCARED-R; Muris, Merckelbach, Schmidt, & Mayer, 1999)

The SCARED-R is a self-report questionnaire of DSM-IV anxiety symptoms (American Psychiatric Association, 1994). The original version comprised 38 items across five dimensions of anxiety symptoms: Panic Disorder, Generalized Anxiety Disorder, Separation

Anxiety Disorder, Social Phobia, and school refusal (Birmaher et al., 1997). The questionnaire has since been revised (Muris et al., 1999) and validated in other countries such as Holland (Hale, Raaijmakers, Muris, & Meeus, 2005). The SCARED-R for those aged 8–18 years included 28 new items for a total of 66 and evaluates 9 subscales: Panic Disorder, Separation Anxiety Disorder (includes school refusal), Generalized Anxiety Disorder, Social Phobia, Specific Phobia (3 types: animal, situational or injury / injection), Obsessive Compulsive Disorder, and Post-traumatic Stress Disorder. Frequency of each symptom is measured on a 3-point scale (0 = almost never, 1 = sometimes and 2 = often). SCARED-R total score and subscale scores are derived by summing relevant items. Psychometric analyses of the SCARED-R were conducted in a community sample of 674 Dutch children aged 8–13 years ($M_{age} = 10.28$; $SD = 1.22$). There are two versions of the SCARED-R, a child report and a parent report. In terms of internal consistency, most item-subscale correlations were above .30 (Table 2). Factor analyses revealed a 1-factor structure.

3.2.3. School Anxiety Inventory-Short version (SAI-SV, García-Fernández & Inglés, 2017)

The SAI-SV is a self-report measure based on the three-dimensional theory of anxiety (Lang, 1968) and the interactive approach (Endler, 1973). This instrument assesses different anxiety-generating situations and the three anxiety response systems at the same time. The predecessor of this instrument was the School Fears Inventory (SFI, García-Fernández, 1997; Méndez, 1988). This instrument can be administered to youths aged 12–18 years and a version for children aged 8–12 years is also available (Gómez-Núñez, 2015). The extensive original version of the SAI proposed by García-Fernández, Inglés, Martínez-Monteagudo, Marzo, and Estévez (2011) comprised 23 items related to school situations and 20 responses (9 cognitive, 6 behavioral and 5 psychophysiological) along a 5-point Likert scale (0 = never, 4 = always). The SAI has been translated into French (Delgado, García-Fernández, Inglés, & Hugon, 2011).

To address concerns about the SAI's length, García-Fernández and Inglés (2017) developed a shorter version (SAI-SV). The SAI-SV for youth aged 12–18 years comprises 15 items related to school situations and 15 items related to the three response systems of anxiety (5 cognitive, 5 physiological, and 5 behavioral responses along a 5-point Likert scale (0 = never, 4 = always). Higher scores indicate higher anxiety levels on the corresponding scales. Three factors were identified: (1) Anxiety about Aggression, (2) Anxiety about Social Evaluation, and (3) Anxiety about Academic Failure. Adequate internal consistency coefficients for all SAI-SV scores were revealed in community sample of 2367 Spanish students aged 12–18 years ($M_{age} = 14.80$; $SD = 1.92$) (García-Fernández & Inglés, 2017) (Table 2).

4. Discussion and conclusions

The aim of this study was to offer a compilation of descriptive and psychometric characteristics of current screening questionnaires for SAPs through a critical systematic review. Nine instruments were included that met selection criteria (Self-Efficacy Questionnaire for School Situations, School Refusal Assessment Scale-Revised, School Refusal Personality Scale, Assessing Reasons for School Non-Attendance, Inventory of School Attendance Problems, School Refusal Evaluation Scale for Adolescents, Visual Analogue Scale for Anxiety-Revised, Screen for Child Anxiety Related Emotional Disorders-Revised, and School Anxiety Inventory).

To analyze the internal structure of the various instruments, Principal Component Analysis was primarily used in this review. This method of estimating and extracting components is considered simple and effective and is widely used probably because it is by default placed in highly used statistical software packages and has lower computer resource demands (Hefetz & Liberman, 2017). However, other alternatives should be considered, such as the factorization method of Unweighted Least Squares (ULS, Jöreskog, 1977) which allows the use of Exploratory Factor Analysis in conditions that were not possible before (Lloret, Ferreres, Hernández-Baeza, & Tomás, 2014). On the other hand, most of the studies assumed an orthogonal factorial solution using a varimax rotation procedure. In the last two decades, however, studies have revealed an evolution toward oblique rotation (Conway & Huffcutt, 2003; Fabrigar, Wegener, MacCallum, & Strahan, 1999; Ford, MacCallum, & Tait, 1986). This evolution is due to the fact that traditionally orthogonal rotation was considered simpler and easier to interpret, despite the fact that different studies have indicated that oblique rotation is capable of presenting clearer, simpler and more interpretable structures (Finch, 2006; Henson & Roberts, 2006; Matsunaga, 2010; Preacher & MacCallum, 2003).

Based on the standards established by George and Mallery (2003), indices of internal consistency and test-retest reliability for the reviewed measures may be considered acceptable to excellent, except for the School Refusal Personality Scale (Honjo et al., 2003) where internal consistency indices were lower than .70 in two of its three dimensions. Coefficient alpha was the most popular measure of reliability reported in studies reviewed here. However, numerous deficiencies of coefficient alpha have been documented in the psychometric literature (Watkins, 2017). For this reason, researchers are encouraged to apply practical alternatives such as coefficient omega and glb coefficients in the presence of skew items (Dunn, Baguley, & Brunnsden, 2014; Peters, 2014; Trizano-Hermosilla & Alvarado, 2016). In addition, few studies examined the temporal stability of the questionnaires examined and, among those that did, short intervals of no more than 14 days were utilized.

In addition, the methodological procedures primarily used to validate SAPs questionnaires involved relationships with other questionnaires that assess similar constructs (e.g., school avoidance, fear, anxiety) as well as relationships with other instruments that assess related constructs (e.g., depression, social anxiety). Only one of the questionnaires reviewed, the SRAS-R (Kearney, 2002), has included a correlation with other assessment procedures (e.g., an interview schedule about anxiety disorders) and two other instruments, the SCREEN (Gallé-Tessonneau & Gana, 2019) and the VAA-R (Bernstein & Garfinkel, 1992), have established comparative results between clinical and non-clinical samples.

Investigations have revealed that SAPs can occur without associated psychiatric disorders in community samples (Skedgell & Kearney, 2018). However, many instruments were originally designed or used with clinical samples (e.g., SEQ-SS; SRAS-R; ISAP; SRPS; SCARED). From a preventive approach, recent instruments have been tested with community samples, such as the ARSNA (Havik et al.,

2015) and the SCREEN (Gallé-Tessonneau & Gana, 2019), the latter validated in both clinical and community populations. Other instruments such as the SRAS-R (Kearney, 2002), initially aimed at the clinical population, have also been applied in community samples with adequate psychometric properties (González et al., 2016, 2017, 2018a; Lyon, 2010; Richards & Hadwin, 2011; Seçer, 2014). On the other hand, Knollmann, Reissner, and Hebebrand (2019) initially validated the ISAP with a clinical sample but stated that future studies should analyze its applicability for detecting students with first signs of SAPs and for informing prevention strategies. SAPs instruments have thus been expanded from clinical to community populations in recent years (González et al., 2019; González, Kearney et al., 2018).

Most questionnaires for SAPs address youth aged 8–17 years but important developmental differences should be considered. Younger children, for example, often display general distress and separation problems with respect to difficulties attending school whereas older children often display more complex anxiety and mood conditions and behavior problems with respect to SAPs (Wood et al., 2012). In addition, instruments for SAPs and related constructs may be less reliable in younger children and so adding behavioral observations and other assessment methods may be more necessary for this group (Thomassin, Raftery-Helmer, & Hersh, 2018). Researchers and other professionals should carefully consider the age of their sample when selecting the most appropriate instrument and consider a multi-method assessment approach in most cases.

The complex nature of absenteeism makes it difficult to find an instrument that covers all types and reasons for SAPs. Among the instruments reviewed, those that assess anxiety-based school refusal (e.g., SRAS-R, ARSNA, SCREEN, ISAP, VAA-R, SCARED-R, and SAI-SV) are predominant. The SRAS-R and the ARSNA also include items related to truancy whereas the ISAP contains dimensions that assess contextual risk factors such as problems with parents, peers, teachers, and school. School withdrawal and school exclusion are types of SAPs that are not covered by the measures reviewed here. In this sense, the School Non-Attendance Checklist (SNACK; Heyne et al., 2019), despite not having been included in the theoretical review due to lack of psychometric data, is a screening device to differentiate SAPs types (school refusal, truancy, school withdrawal, and school exclusion or, alternatively, nonproblematic absenteeism). This measure may be useful at the start of an assessment process to identify SAP type and suggest avenues for further evaluation using other, more precise instruments to design an appropriate intervention.

Recent theoretical reviews conclude that the multifaceted nature of SAPs requires a comprehensive assessment process that includes subjective student views as well as environmental factors such as family and school contexts (Elliott & Place, 2019; Inglés, González, García-Fernández, Vicent, & Martínez-Monteagudo, 2015; Kearney, 2016; Prakash et al., 2017). However, most self-reports exclusively evaluate a student's symptoms or the causes that maintain their SAPs. Calls for more research on multiple levels of influence on SAPs by placing the child within a nested framework of interacting systems have become more frequent (Gottfried & Gee, 2017; Kearney, 2008; Melvin et al., 2019). New instruments could thus be designed to assess broader biopsychosocial or bio-ecological elements that affect SAPs and their levels of risk.

Such a viewpoint would also match well with a multi-tiered system of supports (MTSS) approach that includes multifaceted tiers of domains related to school attendance (Kearney & Graczyk, 2020). From the factorial solutions presented here, the multidimensional nature of SAPs is apparent and may fit well with a three-tiered system of respective supports for various absenteeism severity levels (Kearney et al., 2019a). Instruments that allow proactive distinctions between these tiers and that include a multi-source and multi-method assessment (Kearney et al., 2019b) are necessary. Aspects of the instruments reviewed here, including those with a functional assessment component that is often emphasized in MTSS approaches, may be particularly useful in this regard (Kearney et al., 2019b; Kieling et al., 2011; Lösel & Farrington, 2012).

Although this study provides relevant information both for research and the professional field, limitations should be noted. First, some potential work may have been excluded from the review due to the terms used in the search strategy or because of publication bias. However, to reduce this risk, different synonyms were used for each of the words in the search strategy and not only were considered direct results obtained during the search process in databases, but also authors were contacted and the listing of references in the manuscripts selected were analyzed. Second, new psychometric studies continue to be published in this area. Third, other data collection instruments such as behavioral observations and interviews are used as evaluation methods for SAPs and were not included here. Finally, other databases could have been used in the study search process. However, four databases that cover most of the available scientific literature in the field of study were utilized, including two multidisciplinary ones (Web of Science and Scopus) and two specific ones in Education (ERIC) and Psychology (PsycINFO).

As social significance has increased regarding the relevance of attending school to favor the formative, social and personal development of young people, measures have also increased both at the national and international levels to alleviate school absenteeism through the enactment of different legal provisions and prevention and intervention measures. This is reflected in Goal 4 for Sustainable Development of the 2030 Agenda approved by the United Nations General Assembly in 2015, which urges governments to ensure that all girls and boys complete primary and secondary education. However, despite the fact that in many countries the goal of offering free compulsory basic education has been achieved, we are faced with the problem of SAPs. Given this situation, it is essential to have valid and reliable instruments to assess this problem.

Despite these limitations, the current review reveals that significant progress has been made in the number of instruments to specifically assess SAPs and to disseminate findings by sharing the items and main features of the instruments. According to the fourth goal for Sustainable Development of the 2030 Agenda, governments should ensure that all girls and boys complete primary and secondary education in 2030. In order to make this happen, it is essential to have reliable measures to assess the SAPs in order to prevent and control this behavior. However, other shortcomings need to be addressed in future work, such as the design of instruments aimed at families and teachers, the need for cross-validation studies in larger and more diverse samples, include the analysis of variance since many times it does not appear, cross-cultural validations in other languages and analyze the reliability generalization of those measures widely used. This statistical analysis is a measurement meta-analytic method used to explore the empirical examination

of the variability of reliability estimates in different applications of a measure (Vicent, Aparicio, Sánchez-Meca, & González, 2019). Despite the modest number of relevant instruments available, several questionnaires, inventories, and scales for SAPs have strong validity and reliability. In some cases, the publication of the instruments is so recent that their psychometric properties have not yet been examined in multiple samples. Ongoing studies should thus analyze the reliability and construct validity of these instruments from other samples of students, in other cultures. From this review, professionals of educational and clinical psychology have an updated document with a list of relatively reliable and valid standardized instruments to evaluate SAPs.

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Declaration of Competing Interest

The authors report no declarations of interest.

References¹

- Achenbach, T. M. (1991a). *Manual for the child behavior checklist 4–18 and 1991 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Achenbach, T. M. (1991b). *Manual for the teacher's report form and 1991 profile*. Burlington, VT: Department of Psychiatry, University of Vermont.
- Adika, L. O. (2016). Perceived indices of truancy among selected adolescents in Oyo town: Implications for behavioural change. *Journal of Education and Practice*, 7(16), 42–45.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders (fourth edition)*. Washington, DO: American Psychiatric Association.
- *Bernstein, G. A., & Garfinkel, B. D. (1992). The visual analogue scale for anxiety-revised: Psychometric properties. *Journal of Anxiety Disorders*, 6(3), 223–239. [https://doi.org/10.1016/0887-6185\(92\)90035-6](https://doi.org/10.1016/0887-6185(92)90035-6).
- Birmaher, B., Khetarpal, S., Brent, D., Cully, M., Balach, L., Kaufman, J., ... Neer, S. M. (1997). The screen for child anxiety related emotional disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36(4), 545–553. <https://doi.org/10.1097/00004583-199704000-00018>.
- Conway, J. M., & Huffcutt, A. (2003). A review and evaluation of exploratory factor analysis practices in organizational research. *Organizational Research Methods*, 6(2), 147–168. <https://doi.org/10.1177/1094428103251541>.
- Delgado, B., García-Fernández, J. M., Inglés, C. J., & Hugon, M. (2011). Preliminary psychometric properties of the French version of the School Anxiety Inventory. In *Paper Presented in the Conference of the European Association for Research on Adolescence (EARA)*.
- Döpfner, M., Berner, W., & Lehmkuhl, G. (1995). Reliability and factorial validity of the Youth Self-Report of the Child Behavior Checklist in a clinical sample. *Diagnostica*, 41(3), 221–244.
- Dunn, T. J., Baguley, T., & Brunsden, V. (2014). From alpha to omega: A practical solution to the pervasive problem of internal consistency estimation. *British Journal of Psychology*, 105, 399–412. <https://doi.org/10.1111/bjop.12046>.
- Elliott, J. G., & Place, M. (2019). Practitioner review: School refusal developments in conceptualisation and treatment since 2000. *Journal of Child Psychology and Psychiatry*, 60(1), 4–15. <https://doi.org/10.1111/jcpp.12848>.
- Endler, N. S. (1973). The person versus the situation a pseudo issue? A response to others. *Journal of Personality*, 41(2), 287–303. <https://doi.org/10.1111/j.1467-6494.1973.tb00095.x>.
- Erbaugh, S. (1984). *The anxiety rating scale for children (ARC)*. Unpublished instrument.
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272–299. <https://doi.org/10.1037/1082-989X.4.3.272>.
- Fernández-Sogorb, A., Inglés, C. J., Sanmartín, R., González, C., Vicent, M., & García-Fernández, J. M. (2018). Validation of the Visual Analogue Scale for Anxiety-Revised and school refusal across anxiety profiles. *International Journal of Clinical and Health Psychology*, 18, 264–272. <https://doi.org/10.1016/j.ijchp.2018.07.002>.
- Finch, H. (2006). Comparison of the performance of varimax and promax rotations: Factor structure recovery for dichotomous items. *Journal of Educational Measurement*, 43(1), 39–52. <https://doi.org/10.1111/j.1745-3984.2006.00003.x>.
- Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The application of exploratory factor analysis in applied psychology: A critical review and analysis. *Personnel Psychology*, 39(2), 291–314. <https://doi.org/10.1111/j.1744-6570.1986.tb00583.x>.
- Fujigaki, Y. (1996). *The association between feelings of school avoidance and friend relationship stressors – From the standpoint of self-image and coping strategies* (Master's Thesis). Nagoya: Japan.
- *Gallé-Tessonau, M., & Gana, K. (2019). Development and validation of the school refusal evaluation scale for adolescents. *Journal of Pediatric Psychology*, 44(2), 153–163. <https://doi.org/10.1093/jpepsy/jsy061>.
- García-Fernández, J. M. (1997). *Validación de tres formas del Inventario de Miedos Escolares (Tesis doctoral)* [Validation of three forms of the School Fear Inventory (Doctoral dissertation)]. Murcia: University of Murcia.
- *García-Fernández, J. M., & Inglés, C. J. (2017). *Inventario de ansiedad escolar abreviado. IAES-A Manual [School Anxiety Inventory-Short version, SAI-manual]*. Madrid: Editorial EOS.
- García-Fernández, J. M., Inglés, C. J., Martínez-Monteaquedo, M. C., Marzo, J. C., & Estévez, E. (2011). Inventario de Ansiedad Escolar: validación en una muestra de estudiantes de Educación Secundaria [School anxiety inventory: validation in a sample of secondary school students]. *Psicothema*, 23(2), 301–307.
- Garfinkel, B. D., Bernstein, G. A., & Erbaugh, S. E. (1984). *The visual analogue scale for anxiety*. Unpublished instrument.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.)*. Boston, MA: Allyn & Bacon.
- Gómez-Núñez, M. I. (2015). *Elaboración y validación de un cuestionario para evaluar la ansiedad escolar en la infancia tardía (Tesis doctoral)* [Preparation and validation of a questionnaire to assess school anxiety in late childhood]. Doctoral dissertation. Alicante: University of Alicante.
- González, C., Díaz-Herrero, A., Vicent, M., Sanmartín, R., Pérez-Sánchez, A. M., & García-Fernández, J. M. (2019). Subtyping of adolescents with school refusal behavior: Exploring differences across profiles in self-concept. *International Journal of Environmental Research and Public Health*, 16(23), 1–14. <https://doi.org/10.3390/ijerph16234780>.
- González, C., Inglés, C. J., Kearney, C. A., Vicent, M., Sanmartín, R., & García-Fernández, J. M. (2016). School Refusal Assessment Scale-Revised: Factorial invariance and latent means differences across gender and age in Spanish children. *Frontiers in Psychology*, 7, 1–10. <https://doi.org/10.3389/fpsyg.2016.02011>.

¹ References preceded by an asterisk were included in the systematic review.

- González, C., Kearney, C. A., Lagos-San Martín, N., Sanmartín, R., Vicent, M., Inglés, C. J., ... García-Fernández, J. M. (2017). School Refusal Assessment Scale-Revised Chilean version: factorial invariance and latent means differences across gender and age. *Journal of Psychoeducational Assessment*, 36(8), 835–843. <https://doi.org/10.1177/0734282917712173>.
- González, C., Inglés, C. J., Sanmartín, R., Vicent, M., Calderón, C. M., & García-Fernández, J. M. (2018). Testing factorial invariance and latent means differences of the school refusal assessment scale-revised in Ecuadorian adolescents. *Current Psychology*. <https://doi.org/10.1007/s12144-018-9871-1>.
- González, C., Kearney, C. A., Jiménez-Ayala, C. E., Sanmartín, R., Vicent, M., Inglés, C. J., ... García-Fernández, J. M. (2018). Functional profiles of school refusal behavior and their relationship with depression, anxiety, and stress. *Psychiatry Research*, 269, 140–144. <https://doi.org/10.1016/j.psychres.2018.08.069>.
- Gottfried, M. A., & Gee, K. A. (2017). Identifying the determinants of chronic absenteeism: A bioecological systems approach. *Teachers College Record*, 119(7), 1–34.
- Haight, C., Kearney, C. A., Hendron, M., & Schafer, R. (2011). Confirmatory analyses of the school refusal assessment scale-revised: Replication and extension to a truancy sample. *Journal of Psychopathology Behavioral Assessment*, 33(2), 196–204. <https://doi.org/10.1007/s10862-011-9218-9>.
- Hale, W. W., Raaijmakers, Q., Muris, P., & Meeus, W. (2005). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED) in the general adolescent population. *Journal of the American Academy of Child and Adolescent Psychiatry*, 44(3), 283–290. <https://doi.org/10.1097/00004583-200503000-00013>.
- *Havik, T., Bru, E., & Estesvåg, S. K. (2015). Assessing reasons for school non-attendance. *Scandinavian Journal of Educational Research*, 59(3), 316–336. <https://doi.org/10.1080/00313831.2014.904424>.
- Hefetz, A., & Liberman, G. (2017). The factor analysis procedure for exploration: A short guide with examples. *Cultura y Educación*, 29(3), 526–562. <https://doi.org/10.1080/11356405.2017.1365425>.
- Henson, R. K., & Roberts, J. K. (2006). Use of exploratory factor analysis in published research. Common errors and some comment on improved practice. *Educational and Psychological Measurement*, 66(3), 393–416. <https://doi.org/10.1177/0013164405282485>.
- Heyne, D., Gren-Landell, M., Melvin, G., & Gentle-Genitty, C. (2019). Differentiation between school attendance problems: Why and how? *Cognitive and Behavioral Practice*, 26(1), 8–34. <https://doi.org/10.1016/j.cbpra.2018.03.006>.
- *Heyne, D., King, N., Tonge, B., Rollings, S., Pritchard, M., Young, D., ... Myerson, N. (1998). The self-efficacy questionnaire for school situations: Development and psychometric evaluation. *Behaviour Change*, 15(1), 31–40. <https://doi.org/10.1017/S081348390005588X>.
- Heyne, D., Maric, M., Kaijser, J., Duizer, L., Sijtsma, C., & Van der Leden, S. (2007). *Self-efficacy questionnaire for school situations-Dutch version*. Unpublished measure. Leiden, the Netherlands: Leiden University.
- Heyne, D., Vreeke, L. J., Maric, M., Boelens, H., & Van Widenfelt, B. M. (2016). Functional assessment of school attendance problems: An adapted version of the school refusal assessment scale-revised. *Journal of Emotional and Behavioral Disorders*, 25(3), 178–192. <https://doi.org/10.1177/1063426616661701>.
- *Honjo, S., Sasaki, Y., Kaneko, H., Tachibana, K., Murase, S., Ishii, T., ... Nishide, T. (2003). Study on feelings of school avoidance, depression, and character tendencies among general junior high and high School students. *Psychiatry and Clinical Neurosciences*, 57(5), 464–471. <https://doi.org/10.1046/j.1440-1819.2003.01149.x>.
- Inglés, C. J., González, C., García-Fernández, J. M., Vicent, M., & Martínez-Monteagudo, M. C. (2015). Current status of research on school refusal. *European Journal of Education and Psychology*, 8(1), 37–52. <https://doi.org/10.1016/j.ejeps.2015.10.005>.
- Jöreskog, K. G. (1977). Factor analysis by least-squares and maximum-likelihood methods. In K. Enslein, A. Ralston, & H. S. Wilf (Eds.), *Statistical methods for digital computers* (vol. 3). New York, NY: Wiley.
- *Kearney, C. A. (2002). Identifying the function of school refusal behavior: A revision of the School Refusal Assessment Scale. *Journal of Psychopathology and Behavioral Assessment*, 24(4), 235–245. <https://doi.org/10.1023/A:1020774932043>.
- Kearney, C. A. (2006). Confirmatory factor analysis of the School Refusal Assessment Scale-Revised: Child and parent versions. *Journal of Psychopathology and Behavioral Assessment*, 28(3), 139–144. <https://doi.org/10.1007/s10862-005-9005-6>.
- Kearney, C. A. (2008). An interdisciplinary model of school absenteeism in youth to inform professional practice and public policy. *Educational Psychology Review*, 20, 257–282. <https://doi.org/10.1007/s10648-008-9078-3>.
- Kearney, C. A. (2016). *Managing school absenteeism at multiple tiers: An evidence-based and practical guide for professionals*. New York, NY: Oxford University Press.
- Kearney, C. A., & Albano, A. M. (2018). *When children refuse school: A cognitive-behavioral therapy approach/Parent workbook* (3rd ed.). New York, NY: Oxford University Press.
- Kearney, C. A., & Graczyk, P. A. (2020). A multidimensional, multi-tiered system of supports model to promote school attendance and address school absenteeism. *Clinical Child and Family Psychology Review*, 23, 316–337. <https://doi.org/10.1007/s10567-020-00317-1>.
- Kearney, C. A., & Silverman, W. K. (1993). Measuring the function of school refusal behavior: The school refusal assessment scale. *Journal of Clinical Child Psychology*, 22(1), 85–96. https://doi.org/10.1207/s15374424jccp2201_9.
- Kearney, C. A., Chapman, G., & Cook, L. C. (2005). School refusal behavior in young children. *International Journal of Behavioral Consultation and Therapy*, 1(3), 212–218. <https://doi.org/10.1037/h0100746>.
- Kearney, C. A., González, C., Graczyk, P., & Fornander, M. J. (2019a). Reconciling contemporary approaches to school attendance and school absenteeism: Toward promotion and nimbler response, global policy review and implementation, and future adaptability (Part 1). *Frontiers in Psychology*, 10, 1–16. <https://doi.org/10.3389/fpsyg.2019.02222>.
- Kearney, C. A., González, C., Graczyk, P., & Fornander, M. J. (2019b). Reconciling contemporary approaches to school attendance and school absenteeism: Toward promotion and nimbler response, global policy review and implementation, and future adaptability (Part 2). *Frontiers in Psychology*, 10, 1–14. <https://doi.org/10.3389/fpsyg.2019.02605>.
- Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., ... Rahman, A. (2011). Child and adolescent mental health worldwide: Evidence for action. *Lancet*, 378, 1515–1525. [https://doi.org/10.1016/S0140-6736\(11\)60827-1](https://doi.org/10.1016/S0140-6736(11)60827-1).
- King, N. J., Ollendick, T. H., & Tonge, B. J. (1995). *School refusal: Assessment and treatment*. Boston, MA: Allyn & Bacon.
- *Knollmann, M., Reissner, V., & Hebebrand, J. (2019). Towards a comprehensive assessment of school absenteeism: Development and initial validation of the inventory of school attendance problems. *European Child & Adolescent Psychiatry*, 28(3), 1–16. <https://doi.org/10.1007/s00787-018-1204-2>.
- Knollmann, M., Sicking, A., Hebebrand, J., & Reissner, V. (2017). Die Einschätzungsskala der Schulverweigerung: Psychometrische Gütekriterien und Validierung einer modifizierten Version [School refusal rating: Psychometric quality criteria and validation of a modified version]. *Zeitschrift für Kinder- und Jugendpsychiatrie und Psychotherapie*, 45(4), 265–280. <https://doi.org/10.1024/1422-4917/a000415>.
- Kovacs, M. (1983). *The Children's Depression Inventory: A self-rated depression scale for school-aged youngsters*. Unpublished material. University of Pittsburgh.
- Kovacs, M. (1992). *Children's depression inventory*. Nueva York: Multi-Health Systems.
- Kovacs, M., & Beck, A. T. (1977). An empirical-clinical approach toward a definition of childhood depression. In J. G. Schulterbrandt, & A. Raskin (Eds.), *Depression in childhood: Diagnosis, treatment and conceptual models* (pp. 1–25). New York, NY: Raven Press.
- La Greca, A. M., Dandes, S. K., Wick, P., Shaw, K., & Stone, W. L. (1988). Development of the social anxiety scale for children: Reliability and concurrent validity. *Journal of Clinical Child Psychology*, 17(1), 84–91. https://doi.org/10.1207/s15374424jccp1701_11.
- Lang, M. (1968). Fear reduction and fear behavior: Problems in treating a construct. In J. U. H. Shilen (Ed.), *Research in psychotherapy* (vol. 3, pp. 90–102). Washington: American Psychological Association.
- Lang, M., & Tisher, M. (1978). *Children depression scale*. Melbourne: Australian Council for Educational Research.
- Lloret, S., Ferreres, A., Hernández-Baeza, A., & Tomás, I. (2014). El análisis factorial exploratorio de los ítems: una guía práctica, revisada y actualizada [The exploratory factor analysis of the items: A practical, revised and updated guide]. *Anales de Psicología*, 30(3), 1151–1169. <https://doi.org/10.6018/analesps.30.3.199361>.
- Lösel, F., & Farrington, D. P. (2012). Direct protective and buffering protective factors in the development of youth violence. *American Journal of Preventive Medicine*, 43, S8–S23. <https://doi.org/10.1016/j.amepre.2012.04.029>.
- Lyon, A. R. (2010). Confirmatory factor analysis of the school refusal assessment scale-revised in an African American community sample. *Journal of Psychoeducational Assessment*, 28(6), 511–523. <https://doi.org/10.1177/0734282909353438>.

- Matsunaga, M. (2010). How to factor-analyze your data right: Do's, don'ts, and how-to's. *International Journal of Psychological Research*, 3(1), 97–110. <https://doi.org/10.21500/20112084.854>.
- Melvin, G. A., Heyne, D., Gray, K. M., Hastings, R. P., Totsika, V., Tonge, B. J., & Mirjana-Freeman, M. (2019). The Kids and Teens at School (KiTeS) framework: An inclusive bioecological systems approach to understanding school absenteeism and school attendance problems. *Frontiers in Education*, 4, 1–9. <https://doi.org/10.3389/educ.2019.00061>.
- Méndez, F. X. (1988). *Inventario de Miedos Escolares [School Fear Inventory]*. Unpublished material. Murcia: University of Murcia.
- * Muris, P., Merckelbach, H., Schmidt, H., & Mayer, B. (1999). The revised version of the screen for child anxiety related emotional disorders (SCARED-R): Factor structure in normal children. *Personality and Individual Differences*, 26(1), 99–112. [https://doi.org/10.1016/S0191-8869\(98\)00130-5](https://doi.org/10.1016/S0191-8869(98)00130-5).
- Ng, V. V., Heyne, D., Cheng, Y., & Husain, M. (2019). The Malay self-efficacy questionnaire for school situations: Development, reliability, and validity among early adolescents in primary school. *European Journal of Education and Psychology*, 12(1), 91–108. <https://doi.org/10.30552/ejep.v12i1.243>.
- Ollendick, T. H. (1983). Reliability and validity of the revised fear survey schedule for children (FSSC-R). *Behaviour Research and Therapy*, 21(6), 685–692. [https://doi.org/10.1016/0005-7967\(83\)90087-6](https://doi.org/10.1016/0005-7967(83)90087-6).
- Peters, G.-J. Y. (2014). The alpha and the omega of scale reliability and validity: Why and how to abandon Cronbach's alpha and the route towards more comprehensive assessment of scale quality. *European Health Psychologist*, 16(2), 56–69. <https://doi.org/10.31234/osf.io/h47fv>.
- Poznanski, E., Freeman, L., & Mokros, H. (1985). Children's depression rating scale revised. *Psychopharmacology Bulletin*, 4, 979–989.
- Prakash, R., Beattie, T., Javalkar, P., Bhattacharjee, P., Ramanaik, S., Thalinja, R., ... Isac, S. (2017). Correlates of school dropout and absenteeism among adolescent girls from marginalized community in North Karnataka, South India. *Journal of Adolescence*, 61, 64–76. <https://doi.org/10.1016/j.adolescence.2017.09.007>.
- Preacher, K. J., & MacCallum, R. C. (2003). Repairing Tom Swift's electric factor analysis machine. *Understanding Statistics*, 2(1), 13–32. https://doi.org/10.1207/S15328031US0201_02.
- Reid, K. (2007a). Managing school attendance: The professional perspective. *Teacher Development*, 11(1), 21–43. <https://doi.org/10.1080/13664530701194652>.
- Reid, K. (2007b). The views of learning mentors on the management of school attendance. *Mentoring & Tutoring: Partnership in Learning*, 15(1), 39–55. <https://doi.org/10.1080/13611260601037363>.
- Reynolds, C. R., & Richmond, B. (1978). What I think and feel: A revised measure of children's manifest anxiety. *Journal of Abnormal Child Psychology*, 6(2), 271–280. <https://doi.org/10.1023/A:1025751206600>.
- Richards, H. J., & Hadwin, J. A. (2011). An exploration of the relationship between trait anxiety and school attendance in young people. *School Mental Health*, 3(4), 236–244. <https://doi.org/10.1007/s12310-011-9054-9>.
- Seçer, I. (2014). The adaptation of school refusal assessment scale into Turkish: Reliability and validity studies. *Pakistan Journal of Statistics and Operation Research*, 30(3), 1197–1202.
- Silverman, W., & Albano, A. (1996). *The anxiety disorders interview schedule for children-IV (child and parent versions)*. San Antonio, TX: Psychological Corporation.
- Skedgell, K., & Kearney, C. A. (2018). Predictors of school absenteeism severity at multiple levels: A classification and regression tree analysis. *Children and Youth Services Review*, 86, 236–245. <https://doi.org/10.1016/j.chilcyouth.2018.01.043>.
- Spielberg, C. D. (1973). *Manual for the state trait anxiety inventory for children (STAI-C)*. Palo Alto, CA: Consulting Psychologists Press.
- Thomassin, K., Raftery-Helmer, J., & Hersh, J. (2018). A review of behavioral observation coding approaches for the Trier Social Stress Test for children. *Frontiers in Psychology*, 9, 2610. <https://doi.org/10.3389/fpsyg.2018.02610>.
- Trizano-Hermosilla, I., & Alvarado, J. M. (2016). Best alternatives to Cronbach's alpha reliability in realistic conditions: Congeneric and asymmetrical measurements. *Frontiers in Psychology*, 7, 1–8. <https://doi.org/10.3389/fpsyg.2016.00769>.
- Van Duinen, M., Rickelt, J., & Griez, E. (2008). Validation of the electronic visual analogue scale of anxiety. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 32(4), 1045–1047. <https://doi.org/10.1016/j.pnpbp.2008.02.002>.
- Vicent, M., Aparicio, M., Sánchez-Meca, J., & González, C. (2019). A reliability generalization meta-analysis of the child and adolescent perfectionism scale. *Journal of Affective Disorders*, 245, 533–544. <https://doi.org/10.1016/j.jad.2018.11.049>.
- Walter, D., von Bialy, J., von Wirth, E., & Doepfner, M. (2017). Psychometric properties of the German school refusal assessment scale-revised. *Journal of Psychoeducational Assessment*, 36(6), 644–648. <https://doi.org/10.1177/0734282916689641>.
- Watanabe, Y., & Koishi, H. (2000). A study on the negative feelings toward school in junior high school students. *Bulletin of the Faculty of Human Development*, 8, 1–12.
- Watkins, M. W. (2017). The reliability of multidimensional neuropsychological measures: From alpha to omega. *The Clinical Neuropsychologist*, 31, 6–7. <https://doi.org/10.1080/13854046.2017.1317364>.
- Wood, J. J., Lynne-Landsman, S. D., Langer, D. A., Wood, P. A., Clark, S. L., Mark Eddy, J., ... Ialongo, N. (2012). School attendance problems and youth psychopathology: Structural cross-lagged regression models in three longitudinal data sets. *Child Development*, 83, 351–366. <https://doi.org/10.1111/j.1467-8624.2011.01677.x>.