

A NEW SELF-REPORT ASSESSMENT MEASURE OF SOCIAL PHOBIA/ANXIETY IN CHILDREN: THE SOCIAL ANXIETY QUESTIONNAIRE FOR CHILDREN (SAQ-C24)

Vicente E. Caballo¹, Benito Arias², Isabel C. Salazar¹, Marta Calderero¹, María J. Irurtia², and Thomas H. Ollendick³
¹University of Granada; ²University of Valladolid (Spain); ³Virginia Polytechnic Institute and State University (USA)

Abstract

Social phobia/anxiety is a topic that has received considerable attention in adults and, to a lesser extent, in children and adolescents. One of the more widely debated issues in this area of research involves the assessment of social phobia/anxiety with self-report measures. Prior research papers (Caballo et al., 2010, 2012) have developed and validated a psychometrically sound instrument for assessing social anxiety in adults. This paper is the culmination of several years of research aimed at developing a new self-report measure for the assessment of social anxiety in children between the ages of 9 and 15, namely, the "Social Anxiety Questionnaire for Children" (SAQ-C24). The final version of this instrument for children consists of 24 items and almost fully replicates the factor structure of the prior questionnaire for adults, providing only one extra factor (six in total): 1) Speaking in public/Interactions with teachers, 2) Interactions with the opposite sex, 3) Criticism and embarrassment, 4) Assertive expression of annoyance or disgust, 5) Interactions with strangers, and 6) Performing in public. Furthermore, the questionnaire's other psychometric properties are reported, and the results are compared for girls and boys. This research appears to confirm the structure of social phobia/anxiety centered on five/six dimensions.

KEY WORDS: *social phobia, social anxiety, children, adolescents, assessment, questionnaire, SAQ-C24.*

Resumen

La ansiedad/fobia social constituye un tema de constante investigación en adultos y, en menor medida, en niños y adolescentes. Una de las áreas más controvertidas es el de la evaluación por medio de medidas de autoinforme. Trabajos previos (Caballo *et al.*, 2010, 2012) han desarrollado y validado un sólido instrumento de evaluación para la ansiedad social en adultos. El presente trabajo culmina varios años de investigación dirigidos al desarrollo de un nueva medida de autoinforme para la evaluación de la ansiedad social en niños de 9 a 15 años, el "Cuestionario de ansiedad social para niños" (CASO-N24). La versión final de este instrumento para niños consta de 24 ítems y replica casi por completo la estructura factorial del cuestionario anterior para adultos, encontrando sólo un factor más (6 en total): 1) Interacción con el sexo opuesto, 2) Hablar en público/Interacción con profesores, 3) Quedar en evidencia/Hacer el ridículo, 4) Interacción con desconocidos, 5) Expresión de molestia, desagrado o enfado y 6) Actuar en público. Se presentan además otras propiedades psicométricas del cuestionario y se comparan los resultados obtenidos por niños y niñas en cada una de las dimensiones. El presente trabajo parece confirmar la estructura de la ansiedad/fobia social en torno a cinco/seis dimensiones.

PALABRAS CLAVE: *fobia social, ansiedad social, niños, adolescentes, evaluación, cuestionario, CASO-N24.*

Introduction

The assessment of social anxiety is a field that currently requires greater clarification and precision. There are different strategies for such assessment (see Silverman & Ollendick, 2005), although interviews and questionnaires are the ones most widely used. Whereas interviews are deemed to be the most reliable and accurate instruments, questionnaires have their own advantages, such as their quick and easy application.

There is a whole series of questionnaires for the assessment of social anxiety in adults and in children/adolescents, although most of them pose a number of problems. A new self-report measure for the assessment of social anxiety in adults, developed and validated by our team, was published recently in an attempt to address some of those shortcomings (see Caballo, Salazar, Irurtia, *et al.*, 2010; Caballo, Salazar, Arias, *et al.*, 2010; Caballo *et al.*, 2012). Regarding the assessment of social anxiety in children/adolescents, we have reviewed the self-report measures most commonly used in this field. There are three measures that are predominantly used for assessing social anxiety in children and adolescents: the Social Anxiety Scale for Children-Revised (SASC-R; La Greca & Stone, 1993), the Social Phobia and Anxiety Inventory for Children (SPAI-C; Beidel, Turner, & Morris, 1995) and the Liebowitz Social Anxiety Scale for Children and Adolescents (LSAS-CA; Masia-Warner, Klein, & Liebowitz, 2002), all of which originated in the English-speaking world. When focusing solely on adolescents, several more, albeit less well known measures have been used. We thus encounter the Social Anxiety Scale for Adolescents (SAS-A; La Greca & Lopez, 1998), the Social Anxiety Screening Scale

(SASS/EDAS; Olivares & García-Lopez, 1998; Olivares, Piqueras, & Sánchez-García, 2004; Piqueras, Olivares, & Hidalgo, 2012), the Kutcher Generalized Social Anxiety Disorder Scale for Adolescents (K-GSADS-A; Brooks & Kutcher, 2004) and, more recently, in Slovenia, the Social Anxiety Scales for Adolescents (SASA; Puklek & Videc, 2008) and, in Nigeria, the Social Anxiety Scale (SAS; Ayeni, 2012). In some cases, the assessment of social anxiety in adolescents has been limited to measures designed originally for adults, such as the Social Phobia Inventory (SPIN; Connor et al., 2000) or the Social Phobia and Anxiety Inventory (SPAI; Turner, Beidel, Dancu, & Stanley, 1989).

The SASC-R was one of the first instruments designed to assess social phobia in children. It assesses fear of negative evaluation (8 items), social avoidance and distress in new situations (6 items) and generalized social avoidance and distress (4 items). The choice of these aspects is due to the fact it was adapted from the Social Avoidance and Distress Scale (SAD) and the Fear of Negative Evaluation Scale (FNE), both by Watson and Friend (1969), being also used to assess certain aspects related to social phobia in adults, but not the construct as such. The SASC-R consists of 22 items (four of which are filler items, e.g., "I like to play sports") that are scored on a 5-point Likert scale, from 1= "never" to 5= "always", providing a total social anxiety score between 18 and 90. The definition of the cut-off points involved the total scores recorded by groups of schoolchildren, being differentiated according to sex. A high level of social anxiety for girls was considered to be a score of 54 and above, whereas for boys it was 50 and above, while non-anxious girls recorded a score of 40 or less and, boys 36 or less (see La Greca, 1998). However, based on the work by Morris and Masia-Warner (1998), in which a very high proportion of girls (but not of boys) appeared to report a clinically significant level of social anxiety, it was deemed appropriate to use the cut-off points with some degree of caution. Psychometric studies with the SASC-R involving the population at large provide suitable results (e.g., Epkins, 2002; La Greca & Stone, 1993). However, there are few data on the application of the SASC-R to a Hispanic population. Storch, Eisenberg, Roberti, and Barlas (2003) assessed 159 school children, aged between 10 and 13 and of predominantly Dominican and Puerto Rican nationality, living in the metropolitan area of New York City. A confirmatory factor analysis suggested that the solution of three factors was consistent in this sample, and the internal consistency levels were acceptable and similar to those in prior studies. Similar results, in terms of the factor structure of the SASC-R, were reported by Sandin, Chorot, Valiente, Santed, and Sánchez-Arribas (1999), who assessed 327 school children aged between 7 and 16 in the Community of Madrid (Spain). When we consider other samples outside the English-speaking world, we also encounter data of interest. Thus, a Finnish sample of school children aged between 8 and 16 revealed a greater specificity for social phobia with the SASC-R than with the SPAI-C (Kuusikko et al., 2009). The authors nonetheless indicated that the overall means for the Finnish children were lower than those recorded with the US samples, which may have a bearing on use of cut-off point when switching cultures.

The SPAI-C consists of 26 items that evaluate the somatic, cognitive and behavioral symptoms of social phobia, according to the DSM-IV, in children aged bet-

ween 8 and 14, although use has also been made of samples of older ages (e.g., Storch, Masia-Warner, Dent, Roberti, & Fisher, 2004). The adult SPAI provided a basic source for the development of the SPAI-C. The answer format is a 3-point Likert scale (0= "never or hardly ever", 1= "sometimes", 2= "almost always or always"). The possible scores range between 0 and 52, with the highest score being an indicator of higher levels of social anxiety. It has recommended to use a score of 18 or more for considering the presence of social phobia (Beidel, Turner, & Fink, 1996; Beidel, Turner, & Morris, 1998). As in the case of the SASC-R, some caution needs to be exercised in using this cut-off point for the screening of girls (see Morris & Masia-Warner, 1998). In its original form, the SPAI-C had 3 factors: 1) Assertiveness/General conversation (11 items), 2) Traditional social encounters (7 items), and 3) Public performance (7 items). The first of these refers to situations requiring the use of general conversational skills and the use of negative assertion, the second to social encounters (e.g., parties or dances), and the last one to situations such as speaking in public or reading aloud in class (Beidel et al., 1995). However, subsequent studies (including those with non-English-speaking samples) have posited solutions with 4 factors (e.g., Olivares, Sánchez-García, López-Pina, & Rosa-Alcázar, 2010) and 5 factors (Assertiveness, General conversation, Physical/Cognitive symptom, Avoidance and Performing in public) (e.g., Aune, Stiles, & Svarva, 2008; Beidel et al., 1996; Ogliari et al., 2012; Storch et al., 2004). As regards other psychometric properties, studies have been conducted on the validity of the construct of the SPAI-C with suitable results (e.g., Inderbitzen-Nolan, Davies, & McKeon, 2004) and high levels of internal consistency have been reported, as well as its acceptable-to-moderate test-retest reliability (e.g., Beidel et al., 1995; Storch et al., 2004). The SPAI-C has been translated into other languages (e.g., Portuguese, Italian, German, Spanish, Finnish and Norwegian) and some of the instrument's psychometric properties have also been reported. In Brazil, for example, Gauer, Picon, Vasconcellos, Turner, and Beidel (2005) found that with a sample of children aged between 9 and 14 the test-retest reliability was 0.78 and the internal consistency was 0.95. Nevertheless, the best factor solution in this case was four factors. In a Finnish sample (Kuusikko et al., 2009), the SPAI-C recorded very good internal consistency ($\alpha = 0.95$) and proved to be more sensitive in the identification of children and adolescents that fulfill the criteria of social phobia than the SASC-R, although as mentioned earlier, the mean scores for Finnish children were lower than those recorded by US children. This circumstance was previously reported by Melfsen, Florin, and Warnke (1999), cited by Kuusikko et al. (2009), who suggest that a better possible cut-off point for the German version of the SPAI-C is 20 (and not 18 as for the US children). Aune et al. (2008) reported that, in a sample of Norwegian children aged between 11 and 14, the SPAI-C comprised five factors (those mentioned earlier), with suitable internal consistency indices and test-retest reliability. More recently, Ogliari et al. (2012) found that in a sample of Italian school children aged between 8 and 11 the best solution involved 5 factors, with the levels of internal consistency ranging between 0.51 and 0.80.

The LSAS-CA consists of 24 items, with half of these referring to situations of social interaction (e.g., "looking at people you don't know well in the eye") and

the other half to performing situations (e. g., asking questions in class). As with the version for adults (which was a basic source for the development of the items in the children's version), the LSAS-CA has 2 sub-scales: one assesses levels of anxiety and the other avoidance on a 3-point Likert scale (0= none/never to 3= severe/usually, respectively). The total score would be between 0 and 48, covering seven aspects: 1) anxiety related to social interaction, 2) performance anxiety, 3) total anxiety, 4) avoidance of social interaction, 5) avoidance of performance situations, 6) total avoidance, and 7) total LSAS-CA score. Masia-Warner et al. (2003) presented the psychometric properties of the LSAS-CA using a clinical sample ($n= 97$) and another from the general population ($n= 154$), comprising children/adolescents aged between 7 and 18. They found the LSAS-CA had good levels of internal consistency in the two samples (from 0.83 to 0.97) and test-retest reliability (total= 0.94, anxiety= 0.93 and avoidance= 0.92). The cut-off point (LSAS-CA total) of 22.5 allowed distinguishing between individuals with social phobia and those without, while the cut-off point of 29.5 was the dividing line between those participants with social phobia and those diagnosed with other anxiety disorders. This means the use of the cut-off point would depend on the clinician-researcher's aims. Subsequently, results reported by Storch et al. (2006), also using clinical and general samples ($N= 225$), revealed a two-factor solution for the anxiety and avoidance ratings, each with a higher order factor. One factor consisted of items pertaining to social interactions (e.g., "talking on the telephone," "joining a club") and was labeled "Social". The other factor included items related to performing academic tasks (e.g., "writing on the chalkboard or in front of others," "reading aloud in class") and was labeled "School Performance".

In spite of the reliability and validity of the instruments mentioned, certain limitations in their use are evident. First, they pursue different goals. The SASC-R assesses cognitive aspects, as well as distress and social anxiety in general, while the SPAI-C focuses more on evaluating the presence of the typical symptoms of social phobia. Furthermore, the application of this latter instrument is complex because most of the items (from 10 to 26) have multiple-choice answers, which the children find difficult to grasp and take longer to complete (if we consider each sub-item as an individual item we would be dealing with a questionnaire with 60 questions). On the other hand, in the case of the LSAS-CA, there are few studies on its psychometric properties and the samples are relatively small, whereby it may be difficult to generalize regarding aspects such as the cut-off point or the scale's factor structure.

In short, the field of social anxiety assessment in children/adolescents has yet to be developed, above all in non-English-speaking countries. The instruments available have certain major limitations, and the only practice in Spanish-speaking countries has involved the use of translated versions (not necessarily adapted), and there are no studies showing that these instruments contain the most significant social situations for this population. The aim of the current research is to present the development and psychometric properties of a new self-report measure for the assessment of social anxiety in children, which alleviates some of the problems with existing questionnaires and addresses a population other than an English-speaking one.

Method

Participants

Participant subjects were 1067 children from 12 schools in different provinces in the Spanish region of Andalusia. The mean age of all the individuals was 11.80 years ($SD= 1.33$). Out of this total number of participants, 539 were girls, with a mean age of 11.75 years ($SD= 1.31$) and 528 were boys, with a mean age of 11.86 years ($SD= 1.36$). The age distribution can be found in Table 1.

Table 1
Distribution by sex and age of the participants in the study

Age	Number of participants	
	Boys	Girls
9	1	2
10	93	97
11	142	152
12	124	143
13	99	84
14	51	48
15	18	13
Total	528	539

Instruments

The study used the fourth version of the "Social Anxiety Questionnaire for Children" (SAQ-CIV) based on the work by Caballo, Arias, Calderero, Salazar, and Irurtia (2011). The compilation of this questionnaire began several years ago, being published for the first time in Caballo, González, Alonso, and Irurtia (2007). The items in the first version (SAQ-C) were prompted by a review of the literature both on children's phobias (including social anxiety) and on problematic social situations among children being treated for social phobia. This initial version consisted of 82 items grouped into six factors: 1) Interaction with strangers/figures of authority, 2) Expressing/receiving expressions of affection toward/from parents, 3) Being the center of attention, 4) Speaking/performing in public, 5) Being criticized/disapproved of by others, and 6) Interactions with friends. The instrument was subsequently modified and tweaked, adding situations proposed by the children themselves, by psychologists treating children with social anxiety, as well as by researchers in the field and by new literature reviews. Nonetheless, it was not until the publication of the

“Social Anxiety Questionnaire for Adults” (SAQ-A30; Caballo, Salazar, Arias, et al., 2010; Caballo, Salazar, Irurtia, et al., 2010) that we developed the version applied in this study, in which we have added some of the items from the questionnaire for adults, modifying their phrasing to adapt them to the child population.

The SAQ-CIV used in this research is taken from a Spanish version used in a prior paper (SAQ-CIII; Caballo et al., 2011), which consisted of 52 items + 2 control items, being grouped into six factors: 1) Interactions with the opposite sex, 2) Speaking in public/Interactions with teachers, 3) Criticism and embarrassment, 4) Interactions with strangers, 5) Assertive expression of annoyance or disgust, and 6) Performing in public. The items with the best performance in each one of the factors in that study were maintained for this research, constituting a questionnaire of 42 items + 2 control items (SAQ-CIV). This was the questionnaire used in this research, bearing in mind that some items had been drafted in two versions, one for boys and one for girls (especially those addressing the interaction with the opposite sex). From the 42-item version we selected the four items with the highest loading in each of the six factors found in the present study, except for three items (one for each of the factors 1, 2, and 3) with high loadings but with more informative meaning to the factor they were included, in order to develop the final 24-item questionnaire (SAQ-C24) to be used in future studies. This final version of the questionnaire (SAQ-C24) is included in Appendix 1 and 2, one version for each sex.

Procedure

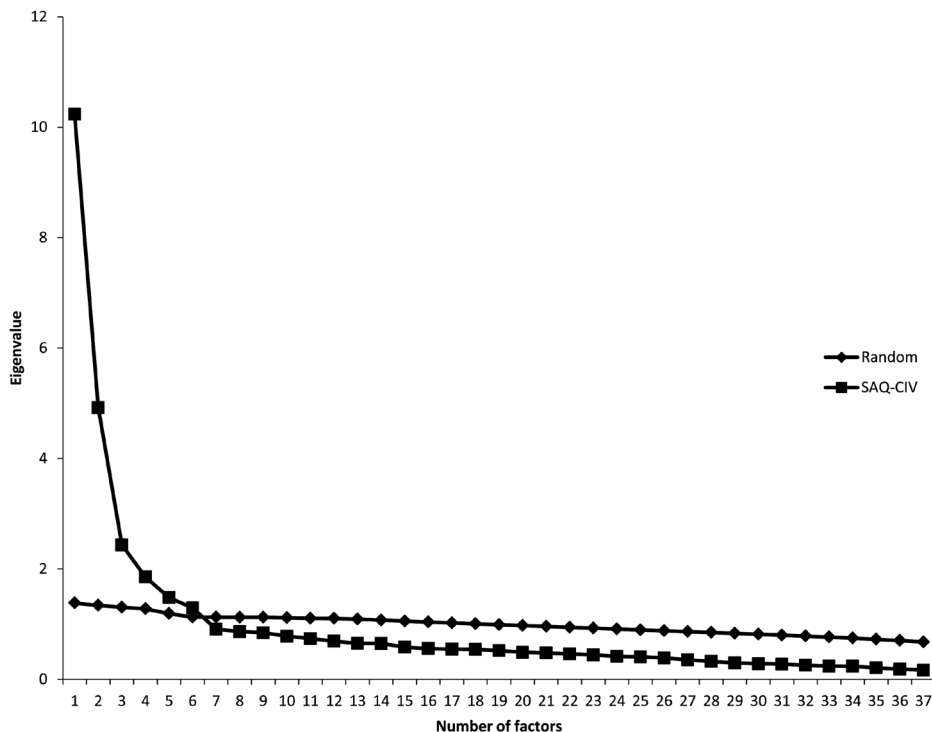
Contact was made with a number of public and private schools in different cities across Andalusia with a view to applying the questionnaire in different classes of children aged between 9 and 15. In all cases, the management teams and counsellors at the school were briefed about the research's goals. The questionnaires were applied in a group to whole classes, with a person from the research team present at all times to answer any queries and uphold the confidentiality of the answers. Special care was taken to ensure the questionnaires were filled in anonymously in order to allow the children to answer more freely and accurately.

Results

Exploratory factor analysis

An exploratory factor analysis (principal components) was conducted on the polychoric correlation matrix using an oblique rotation method (Promax) (table 2). In order to verify whether the number of factors was appropriate, a parallel analysis (Horn, 1965) was computed, as shown in figure 1, with six factors being extracted by the parallel analysis, whereby we maintained that number of factors. The explained variance for that number of factors was 60.10%. The first factor, *Speaking in*

Figure 1
Results of the parallel analysis with the Social Anxiety Questionnaire for Children (SAQ-CIV) (six factors)



Note: Random= Parallel analysis with random eigenvalues; SAQ-CIV= Principal components.

public/Interactions with teachers has an eigenvalue of 10.24 and explains 27.67% of the common variance. The second factor, *Interactions with the opposite sex*, has an eigenvalue of 4.92 and explains 13.30% of the common variance. The third factor, *Criticism and embarrassment*, has an eigenvalue of 2.43 and explains 6.58% of the common variance. The fourth factor, *Assertive expression of annoyance or disgust*, has an eigenvalue of 1.85 and explains 5.01% of the common variance. The fifth factor, *Interactions with strangers*, has an eigenvalue of 1.48 and explains 4.00% of the common variance. Finally, the sixth factor, *Performing in public*, has an eigenvalue of 1.29 and explains 3.50% of the common variance.

Reliability and internal consistency

The internal consistency (Cronbach's alpha) for the questionnaire as a whole was 0.90, with the following figures for each one of the different factors: a) Speaking in

Table 2

Factor loadings of the items from the Social Anxiety Questionnaire for Children-IV (SAQ-CIV) in the exploratory factor analysis (EFA-Promax)

Items for each factor of the SAQ-CIV	Factors						
	F1	F2	F3	F4	F5	F6	Item-total
Factor 1. Speaking in public/Interactions with teachers							
15. Asking a question in class*	79	3	4	15	4	7	0.37
09. Going to the blackboard*	79	2	4	-1	14	7	0.34
39. Being asked a question in class by the teacher*	76	8	25	13	5	11	0.47
32. Talking alone with the teacher about a question	72	4	2	35	2	12	0.40
26. Speaking in front of the whole class	70	13	15	16	2	26	0.48
34. Training or doing physical education in front of the others	69	-3	-11	39	6	-1	0.27
02. Having to talk to a teacher*	64	13	4	16	14	-3	0.37
19. Greeting my teacher when I meet him/her outside school	49	1	-12	32	18	6	0.27
Factor 2. Interactions with the opposite sex							
38. Kissing the boy/girl I like for the first time*	-5	82	18	5	10	13	0.45
8. A boy/girl asks me to be her boy/girlfriend	4	79	17	-3	14	15	0.49
25. Starting a conversation with the boy/girl I like*	20	79	6	11	16	4	0.53
43. Asking the boy/girl I like out for a date*	-8	78	25	-5	9	19	0.43
33. Telling a boy/girl I like something about him/her (e.g., her smile, her hair, etc.)*	3	78	16	3	12	11	0.47
14. Looking a boy/girl that I like in the eyes	18	77	10	12	18	4	0.54
1. Being on my own with a boy/girl that I like	8	75	11	6	17	-3	0.45
Factor 3. Criticism and embarrassment							
22. Making a fool of myself in front of others*	-5	26	71	-4	17	22	0.46
27. Being criticized*	0	12	67	26	8	12	0.44
31. Tripping or falling in front of others	2	10	65	3	27	19	0.45
3. Being teased in public*	13	16	65	8	5	16	0.45
13. Being reprimanded by my teacher	17	16	64	19	12	-9	0.45
37. Losing my voice, stuttering, or having a breaking or trembling voice*	-1	23	60	9	14	19	0.45
10. Making a mistake in front of other people	53	7	53	-1	18	5	0.50

Factor 4. Assertive expression of annoyance or disgust							
29. Telling a classmate I have not liked something he/she said about me*	29	6	11	71	11	2	0.41
41. Telling a classmate not to be the center of attention all the time*	9	7	29	71	2	15	0.40
35. Telling a classmate not to disturb me when I am working*	45	-3	-5	66	19	0	0.35
17. Telling a friend not to take my things without permission*	29	-3	6	61	22	-5	0.32
23. Complaining about someone who bosses everyone around	23	20	24	61	2	3	0.43
Factor 5. Interactions with strangers							
6. Being with other boys/girls that I do not know*	12	28	16	2	73	9	0.50
30. Starting to talk with girls/boys I do not know*	13	24	24	16	71	17	0.58
12. Playing with a group of girls/boys I do not know well*	19	23	15	9	70	10	0.51
18. Asking for something from a classmate I do not know well*	7	14	30	27	57	22	0.53
24. Going to a party or birthday party at which I know only a few people	15	27	22	20	53	29	0.56
Factor 6. Performing in public							
16. Dancing in front of people*	-1	18	12	4	4	71	0.33
7. Singing in public*	-14	27	30	-3	12	71	0.36
4. Taking part in a play at school*	25	3	-4	-6	22	67	0.32
42. Playing a musical instrument in public*	21	9	18	15	7	59	0.41
21. Going out in fancy dress	23	-2	22	6	19	51	0.37

Note 1: Loadings are multiplied by 100 and rounded to the nearest integer.

Note 2: Items with an asterisk (*) are included in the final version of the questionnaire (SAQ-C24).

public/Interactions with teachers, 0.83; b) Interactions with the opposite sex, 0.87; c) Criticism and embarrassment, 0.78; d) Assertive expression of annoyance or disgust, 0.71; e) Interactions with strangers, 0.79, and f) Performing in public, 0.67. Guttman split-half reliability was 0.94.

Correlations between the different dimensions of the SAQ-CIV

The correlations between the different factors in the SAQ-CIV are, in general, from low to moderate, with some of the highest ones being recorded between the dimensions of Interactions with strangers, on the one hand, and Speaking in public/Interactions with teachers, Interactions with the opposite sex, Criticism and

embarrassment and Assertive expression of annoyance or disgust, on the other. The dimension Performing in public is more closely correlated to the factors of Criticism and embarrassment and Interactions with strangers than to the dimension of Speaking in public/Interactions with teachers, while the latter has a low correlation with the factor of Criticism and embarrassment. Table 3 presents these correlations.

Differences between girls and boys in social anxiety

Considered overall, girls recorded a significantly higher score than boys in all the dimensions of social anxiety (with the exception of Performing in public), including global social anxiety (table 4). When we consider the differences between boys and girls within each age, these differences are recorded largely at the age of 10 (in the dimensions of Interactions with the opposite sex [$p < 0.01$], Criticism and embarrassment [$p < 0.001$], Interactions with strangers [$p < 0.001$] and in the questionnaire's overall score [$p < 0.001$]) and at the age of 12 (in the dimensions of Criticism and embarrassment [$p < 0.01$] and in the questionnaire's overall score [$p < 0.05$]). At the age of 11, they differ solely in the dimension of Criticism and embarrassment ($p < 0.001$). In all cases, girls reported a significantly higher score than boys. There are no further differences of any significance between girls and boys within each age. We should note, nevertheless, that the number of individuals aged 9 and 15 is too small to allow making comparisons, so none were made. The differences between boys and girls, although constant, tend to range from small ($0.2 > d < 0.5$) to moderate ($0.5 > d < 0.8$) (table 4).

Differences between ages in social anxiety

A comparison by ages of the individuals within the same sex does not reveal any differences across age. That is, the girls aged between 10 and 15 are no different from each other in the dimensions of social anxiety or in global social anxiety. The same applies when the boys between 10 and 15 are compared. Nevertheless,

Table 3
Inter-factor correlations for exploratory factor analysis of the SAQ-CIV

<i>Factors of the SAQ-CIV</i>	F1	F2	F3	F4	F5	F6
F1 Speaking in public/Interactions with teachers	1.00					
F2 Interactions with the opposite sex	0.10	1.00				
F3 Criticism and embarrassment	0.12	0.42	1.00			
F4 Assertive expression of annoyance or disgust	0.44	0.13	0.20	1.00		
F5 Interactions with strangers	0.33	0.40	0.39	0.31	1.00	
F6 Performing in public	0.14	0.31	0.42	0.10	0.35	1.00

Table 4
Differences between boys and girls in the factors of the SAQ-CIV

<i>Factors of the SAQ-CIV</i>	Boys	Girls	<i>t</i>	<i>p</i>	<i>d</i>
	<i>M (SD)</i>	<i>M (SD)</i>			
F1 Speaking in public/Interactions with teachers	12.73 (4.70)	13.57 (4.96)	-2.71	0.007	0.179
F2 Interactions with the opposite sex	18.00 (6.00)	20.47 (5.68)	-6.65	0.000	0.423
F3 Criticism and embarrassment	16.14 (4.40)	18.86 (4.85)	-9.20	0.000	0.587
F4 Assertive expression of annoyance or disgust	7.91 (2.58)	9.07 (2.75)	-6.11	0.000	0.578
F5 Interactions with strangers	10.32 (3.37)	11.67 (3.70)	-5.99	0.000	0.381
F6 Performing in public	12.42 (3.59)	12.59 (3.65)	-0.72	0.473	0.047
SAQ-CIV total	77.03 (15.53)	85.68 (18.14)	-7.45	0.0000	0.512

it should be noted that the sample of individuals aged 15 was very small, so the comparison is not very reliable in this age. No comparison was made for the nine-year-old participants (3 individuals).

Discussion

The assessment of social anxiety in adults by means of self-report measures involves a series of instruments used internationally, with the recent addition of a questionnaire that eliminates some of their shortcomings (Caballo et al., 2010; 2012). However, it is much more difficult to find self-report measures for children, and those that do exist have certain drawbacks that we have already discussed in the introduction to this paper. The research presented here covers the development of a new questionnaire for the assessment of social anxiety in children. The data appear to show a new measure that is sound, reliable and with a promising future. With a factor structure very similar to that found in the adult population, this new instrument goes some way to confirming the basic dimensions of social anxiety. The "Social Anxiety Questionnaire for Children" (SAQ-CIV), developed in this research, and the "Social Anxiety Questionnaire for adults" (SAQ-A30), developed recently (Caballo et al., 2010; 2012), coincide in five of the dimensions, and only the SAQ-CIV has a further dimension, namely, "Performance in public". The possible explanation for this extra dimension is that these kinds of fears may be present more

frequently early on life (e.g., when children have to play a part in the school play, dress up or play a musical instrument in public), while for most people at least, these situations do not tend to arise once they have become adults.

An analysis of the specific dimensions common to both children and adults reveals that the results obtained in this study once again support the findings of the work with adults (Caballo et al., 2010; 2012). With this coincidence in mind, we find it surprising (as we did at the time in the case of adults) that some of the dimensions we have found in children are not present in most of the self-report measures used today for assessing social anxiety in children. Thus, for example, one of the questionnaires most widely used internationally for assessing social anxiety in children, the Social Anxiety Scale for Children-Revised (SASC-R) does not have a single item that assesses interactions with the opposite sex, nor speaking in public, nor interactions with teachers, nor performing in public. It would appear this scale is designed to measure distress and social anxiety in general (Storch et al., 2004), without focusing on any specific dimension. If we add to this that some items are almost identical to each other (e.g., "I worry about what others think of me", "I worry about what others say about me" or even "I am afraid that the others won't like me" or "If I get into an argument, I worry that the other person will not like me"), we have an instrument that measures only very general aspects of children's social behavior. There are also major problems with other measures of anxiety/social phobia in children. For example, the Social Phobia and Anxiety Inventory for Children (SPAI-C) has its drawbacks when applied to children in a group. Based on our research group's direct experience, it often happens that the children leave some items unanswered, given they are used to providing a single answer in each case and not three or four as in this instrument. A further problem (which is also present in the version for adults) is that the SPAI-C scores for items with more than one answer are averaged out, thereby concealing possible key dimensions for anxiety/social phobia. Finally, we should note that it is a very long questionnaire for children. Although it is presented as a 26-item instrument, it in fact consists of 60 items, which are the real questions the children have to answer, leading to tiredness or boredom in certain cases. Regarding another of the questionnaires used for assessing social anxiety in children, the Liebowitz Social Anxiety Scale for Children and Adolescents (LSAS-CA), it maintains the same structure as the adult scale it originates from (the LSAS; Liebowitz, 1987), that is, 24 items with a double answer for each one of them: one measuring anxiety and the other avoidance, with this structure often being criticized (e.g., Heimberg et al., 1999; Oakman, Van Ameringen, Mancini, & Farvolden, 2003) given the scant additional information this double answer provides and the effort implied to answer not 24 but 48 items. A further problem of this scale is the low consistency of its component dimensions, passing from six (Masia-Warner et al., 2003) to two (Storch et al., 2006) (a problem that likewise occurs with the version for adults).

We contend that the new questionnaire we are introducing here avoids many of these shortcomings: it is short (24 effective items in the final version), all the situations are different (albeit encompassed in six dimensions) and cover numerous circumstances of importance to children, it is very easy to apply and its results give

a more accurate view of the specific dimensions in which children have issues (an essential consideration when planning treatment). The target population ranges from 9-year-olds (the lower limit for applying a group questionnaire, although some children may find it difficult to understand) to 15-year-olds (although we have our doubts whether the adolescents in this age group share more situations with their younger peers or with their older ones).

Furthermore, the dimensions making up the SAQ-CIV have low-to-moderate correlations between each other, largely indicating that these dimensions do not overlap and measure different aspects of social anxiety in children. This is important because with just a handful of items we cover many aspects of potentially problematic social areas in children's life.

Another major issue refers to the differences between boys and girls in terms of social anxiety, with these differences appearing to emerge at an early age and reported by other studies on internationally used self-report measures (e.g., Kuusikko et al., 2009; La Greca, 1998; Morris & Masia-Warner, 1998; Silverman & Ollendick, 2005). Our research here reveals that girls record a significantly higher score than boys in all the dimensions of social anxiety and in global social anxiety. Only in one of those dimensions are the differences insignificant ("Performing in public"). The size of the differences ranges from small to moderate, being largely consistent with the results obtained using the SAQ-A30 in adults (Caballo et al., 2010; 2012). Although it is relatively frequent to find differences between men and women in the literature on social anxiety, such differences are rarely reflected in the cut-off points for self-report instruments (with the exception of the SASC-R, where from the start the authors specify different cut-off points for girls and boys; La Greca, 1998). The authors tend to note that such differences are small, however. Yet those differences often involve different cut-off points for both sexes, as indicated in Caballo et al. (2012). The cut-off points of the SAQ-A30 vary for men and women and this has been remarked upon in the earlier papers. Nevertheless, considering different cut-off points according to sex implies greater attention and consideration on the part of the clinician. Although these differences are often reported, it tends to be more convenient to use a single cut-off point for both sexes, although this may not reflect the reality of the research findings. We should like here to call for greater rigor when considering the cut-off points for the self-report instruments on social anxiety (different for men and women) and not be lured by the attraction of greater simplicity when interpreting the results at the risk of compromising the reliability of clinical reports. Although there are no cut-off points in this paper, given the absence of clinical subjects, we are considering their inclusion in our forthcoming research using the SAQ-C24. In any case, they are likely to be different for boys and girls if the results follow the same trend as in this paper.

Finally, we should like to indicate that the final version of the new "Social Anxiety Questionnaire for Children" (SAQ-C24) involves most of the items recording the best performance in statistical terms, albeit moderated by a clinical and informative perspective. In other words, we have been mindful of the fact the items should have a certain amount of variety within each dimension, favoring those that stimulate an individual's initiative and singling out those situations that occur most

frequently in children's lives (provided, of course, they perform properly in statistical terms). We have therefore chosen four items for each one of the six dimensions, generally the items with a higher loading, except for three items that, although the saturation was high, were not among the first four, but their informative or clinical meaning seemed greater than some of the others with a higher loading (following the points we have mentioned earlier). We hope this instrument will be of use for assessing social phobia/anxiety in children/adolescents from both clinical and research perspectives.

References

- Aune, T., Stiles, T. C., & Svarva, K. (2008). Psychometric properties of the Social Phobia and Anxiety Inventory for Children using a non-American population-based sample. *Journal of Anxiety Disorders, 22*, 1075-1086.
- Ayeni, E. A. (2012). Development, standardization and validation of Social Anxiety Scale. *Ife Psychologia, 20*, 263-274.
- Beidel, D. C., Turner, S. M., & Fink, C. M. (1996). Assessment of childhood social phobia: construct, convergent, and discriminative validity of Social Phobia and Anxiety Inventory for Children (SPAI-C). *Psychological Assessment, 8*, 235-240.
- Beidel, D. C., Turner, S. M., & Morris, T. L. (1995). A new inventory to assess childhood social anxiety and phobia: the Social Phobia and Anxiety Inventory for Children. *Psychological Assessment, 7*, 73-79.
- Beidel, D. C., Turner, S. M., & Morris, T. L. (1998). Social Phobia and Anxiety Inventory for Children (SPAI-C) manual. North Tonawanda, NY: Multi-Health Systems.
- Brooks, S. J., & Kutcher, S. (2004). The Kutcher Generalized Social Anxiety Disorder Scale for Adolescents: assessment of its evaluative properties over the course of a 16-week pediatric psychopharmacotherapy trial. *Journal of Child and Adolescent Psychopharmacology, 14*, 273-286.
- Caballo, V. E., Arias, B., Calderero, M., Salazar, I. C., & Iruiria, M. J. (2011). Acoso escolar y ansiedad social en niños (I): análisis de su relación y desarrollo de nuevos instrumentos de evaluación [Bullying and social anxiety in children (I): analyzing their relationship and developing new self-report assessment measures]. *Behavioral Psychology/Psicología Conductual, 19*, 591-609.
- Caballo, V. E., González, S., Alonso, V., & Iruiria, M. J. (2007). El "Cuestionario de interacción social para niños" (CISO-N): un nuevo instrumento para la evaluación de la ansiedad social en niños [The "Social Interaction Questionnaire for Children" (CISO-N): a new instrument for the assessment of social anxiety in children]. *Psicología Conductual, 15*, 77-93.
- Caballo, V. E., Salazar, I. C., Arias, B., Iruiria, M. J., Calderero, M., & CISO-A Research Team Spain. (2010). Validation of the Social Anxiety Questionnaire for Adults (SAQ-A30) with Spanish university students: Similarities and differences among degree subjects and regions. *Behavioral Psychology/Psicología Conductual, 18*, 5-34.
- Caballo, V. E., Salazar, I. C., Iruiria, M. J., Arias, B., Hofmann, S. G., & CISO-A Research Team (2008). Social anxiety in 18 nations: sex and age differences. *Behavioral Psychology/Psicología Conductual, 16*, 163-187.
- Caballo, V. E., Salazar, I. C., Iruiria, M. J., Arias, B., Hofmann, S. G., & CISO-A Research Team (2010). Measuring social anxiety in 11 countries: development and validation of the

- social anxiety questionnaire for adults. *European Journal of Psychological Assessment*, 26, 95-107.
- Caballo, V. E., Salazar, I. C., Iruetia, M. J., Arias, B., Hofmann, S. G., & CISO-A Research Team (2012). The multidimensional nature and multicultural validity of a new measure of social anxiety: the Social Anxiety Questionnaire for Adults (SAQ-A30). *Behavior Therapy*, 43, 313-328.
- Connor, K. M., Davidson, J. R. T., Churchill, L. E., Sherwood, A., Foa, E., & Weisler, R. H. (2000). Psychometric properties of the Social Phobia Inventory (SPIN): a new self-rating scale. *British Journal of Psychiatry*, 176, 379-386.
- Epkins, C. C. (2002). A comparison of two self-report measures of children's social anxiety in clinic and community samples. *Journal of Clinical Child and Adolescent Psychology*, 31, 69-79.
- Gauer, G. J. C., Picon, P., Vasconcellos, S. J. L., Turner, S. M., & Beidel, D. C. (2005). Validation of the Social Phobia and Anxiety Inventory for Children (SPAI-C) in a sample of Brazilian children. *Brazilian Journal of Medical and Biological Research*, 38, 795-800.
- Heimberg, R. G., Horner, K. J., Juster, H. R., Safren, S. A., Brown, E. J., Schneier, F. R., & Liebowitz, M. R. (1999). Psychometric properties of the Liebowitz Social Anxiety Scale. *Psychological Medicine*, 29, 199-212.
- Horn, J. L. (1965). A rationale and a test for the number of factors in factor analysis. *Psychometrika*, 30, 179-185.
- Inderbitzen-Nolan, H. M., Davies, C. A., & McKeon, N. D. (2004). Investigating the construct validity of the SPAI-C: comparing the sensitivity and specificity of the SPAI-C and the SAS-A. *Journal of Anxiety Disorders*, 18, 547-560.
- Kuusikko, S., Pollock-Wurman, R., Ebeling, H., Hurtig, T., Joskitt, L., Mattila, M. L., Jussila, K., & Moilanen, I. (2009). Psychometric evaluation of Social Phobia and Anxiety Inventory for Children (SPAI-C) and Social Anxiety Scale for Children-Revised (SASC-R). *European Child and Adolescent Psychiatry*, 18, 116-124.
- La Greca, A. M. (1998). *Social Anxiety Scales for Children and Adolescents: manual and instructions for the SASC, SASC-R, SAS-A (adolescents), and parent versions of the scales*. Miami, FL: Universidad de Miami, Departamento de Psicología.
- La Greca, A. M., & Lopez, N. (1998). Social anxiety among adolescents: linkages with peer relations and friendships. *Journal of Abnormal Child Psychology*, 26, 83-94.
- La Greca, A. M., & Stone, W. L. (1993). Social Anxiety Scale for Children-Revised: factor structure and concurrent validity. *Journal of Clinical Child Psychology*, 22, 17-27.
- Liebowitz, M. R. (1987). Social phobia. *Modern Problems in Pharmacopsychiatry*, 22, 141-173.
- Masia-Warner, C. L., Klein, R. G., & Liebowitz, M. R. (2002). *The Liebowitz Social Anxiety Scale for Children and Adolescents (LSAS-CA)*. Available Carrie L. Masia-Warner, Ph.D., New York University School of Medicine, Child Study Center, 215 Lexington Avenue, 13th floor, Nueva York, NY 10016, USA.
- Masia-Warner, C. L., Storch, E. A., Pincus, D. B., Klein, R. G., Heimberg, R. G., & Liebowitz, M. R. (2003). The Liebowitz Social Anxiety Scale for Children and Adolescents: an initial psychometric investigation. *Journal of the American Academy of Child & Adolescent Psychiatry*, 42, 1076-1084.
- Morris, T. L., & Masia-Warner, C. L. (1998). Psychometric evaluation of the Social Phobia and Anxiety Inventory for Children: concurrent validity and normative data. *Journal of Clinical Child Psychology*, 27, 452-458.
- Oakman, J., Van Ameringen, M., Mancini, C., & Furvolden, P. (2003). A confirmatory factor analysis of a Self-Report Version of the Liebowitz Social Anxiety Scale. *Journal of Clinical Psychology*, 59, 149-161.

- Ogliari, A. Scaini, S., Kofler, M. J., Lampis, V., Zanoni, A., Pesenti-Gritti, P., Spatola, C. A. M., Battaglia, M., & Beidel, D. C. (2012). Psychometric properties of the Social Phobia and Anxiety Inventory for Children (SPAI-C). A sample of Italian school-aged children from the general population. *European Journal of Psychological Assessment*, *28*, 51-59.
- Olivares, J., & García-López, L. J. (1998). *Escala para la detección de la ansiedad social* [the Social Anxiety Screening Scale], University of Murcia, Spain.
- Olivares, J., Piqueras, J. A., & Sánchez-García, R. (2004). Escala para la detección de la ansiedad social (EDAS): estructura factorial y fiabilidad en una muestra de adolescente entre 14 y 18 años. *Psicología Conductual*, *12*, 251-268.
- Olivares, J., Sánchez-García, R., López-Pina, J. A., & Rosa-Alcázar, A. I. (2010). Psychometric properties of the Social Phobia and Anxiety Inventory for Children in a Spanish sample. *The Spanish Journal of Psychology*, *13*, 961-969.
- Piqueras, J. A., Olivares, J., & Hidalgo, M. D. (2012). Screening utility of the Social Anxiety Screening Scale in Spanish speaking adolescents. *The Spanish Journal of Psychology*, *15*, 710-723.
- Puklek, M., & Videc, M. (2008). Psychometric properties of the Social Anxiety Scales for Adolescents (SASA) and its relation to positive imaginary audience and academic performance in Slovene adolescents. *Studia Psychologica*, *50*, 49-65.
- Sandín, B., Chorot, P., Valiente, R. M., Santed, M. A., & Sánchez-Arribas, C. (1999). Estructura factorial de la Escala de ansiedad social para niños-revisada (SASC-R). *Revista de Psicopatología y Psicología Clínica*, *4*, 105-113.
- Silverman, W. K., & Ollendick, T. H. (2005). Evidence-based assessment of anxiety and its disorders in children and adolescents. *Journal of Clinical Child and Adolescent Psychology*, *34*, 380-411.
- Storch, E. A., Eisenberg, P. S., Roberti, J. W., & Barlas, M. E. (2003). Reliability and validity of the Social Anxiety Scale for Children-Revised for Hispanic children. *Hispanic Journal of Behavioral Sciences*, *25*, 410-422.
- Storch, E. A., Masia-Warner, C., Dent, H. C., Roberti, J.W., & Fisher, P. H. (2004). Psychometric evaluation of the Social Anxiety Scale for Adolescents and the Social Phobia and Anxiety Inventory for Children: construct validity and normative data. *Journal of Anxiety Disorders*, *18*, 665-679.
- Storch, E. A., Masia-Warner, C., Heidgerken, A. D., Fisher, P. H., Pincus, D. B., & Liebowitz, M. R. (2006). Factor structure of the Liebowitz Social Anxiety Scale for Children and Adolescents. *Child Psychiatry and Human Development*, *37*, 25-37.
- Turner, S. M., Beidel, D. C., Dancu, C. V., & Stanley, M. A. (1989). An empirically derived inventory to measure social fears and anxiety: the Social Phobia and Anxiety Inventory. *Psychological Assessment*, *1*, 35-40.
- Watson, D., & Friend, R. (1969). Measurement of social-evaluative anxiety. *Journal of Consulting and Clinical Psychology*, *33*, 448-457.

RECEIVED: January 16, 2012

ACCEPTED: March 13, 2012

Appendix 1

Social Anxiety Questionnaire for Children (SAQ-C24) (Boys version) <i>(Caballo, Arias, Salazar, Calderero, Irurtia, and Ollendick, 2012)</i>
Initials of name: _____ Age: _____ School: _____ Year: _____
Below are descriptions of some situations in which you could be afraid, embarrassed, or nervous . Please, <i>place an "X" on the number next to each social situation that best reflects what you feel</i> . Do not leave any questions blank and respond as you usually feel; do not worry about your answer because there are no right or wrong ones.

Indicate how much embarrassment, nervousness, or fear the following situations produce for you	None	A little	Quite a lot	A lot
1. Having to talk to a teacher	1	2	3	4
2. Being teased in public	1	2	3	4
3. Taking part in a play at school	1	2	3	4
4. Being with other boys I do not know	1	2	3	4
5. Singing in public	1	2	3	4
6. Going to the blackboard	1	2	3	4
7. Playing with a group of boys I do not know well	1	2	3	4
8. Asking a question in class	1	2	3	4
9. Dancing in front of people	1	2	3	4
10. Telling a friend not to take my things without permission	1	2	3	4
11. Asking something from a classmate I do not know well	1	2	3	4
12. Making a fool of myself in front of others	1	2	3	4
13. Starting a conversation with the girl I like	1	2	3	4
14. Being criticized	1	2	3	4
15. Telling a classmate I do not like something he said about me	1	2	3	4
16. Starting talking with boys I do not know	1	2	3	4
17. Telling a girl I like something about her (for example, her smile, her hair, etc.)	1	2	3	4
18. Telling a classmate not to disturb me when I am working	1	2	3	4
19. Losing my voice, stuttering, or having a breaking or trembling voice	1	2	3	4
20. Kissing the girl I like for the first time	1	2	3	4
21. Being asked a question in class by the teacher	1	2	3	4
22. Telling a classmate not to be the center of attention all the time	1	2	3	4
23. Playing a musical instrument in public	1	2	3	4
24. Asking the girl I like out for a date	1	2	3	4

© Fundacion VECA (all rights reserved). The present questionnaire could be used for clinical and research purposes without previous authorization, but citing the original source (this article). However, it can not be published (in paper, electronically or by any other means) in any language without the written permission from the Fundacion VECA.

Appendix 2

Social Anxiety Questionnaire for Children (SAQ-C24) (Girls version) (Caballo, Arias, Salazar, Calderero, Irurtia, and Ollendick, 2012)
Initials of name: _____ Age: _____ School: _____ Year: _____
Below are descriptions of some situations in which you could be afraid, embarrassed, or nervous . Please, place an "X" on the number next to each social situation that best reflects what you feel. Do not leave any questions blank and respond as you usually feel; do not worry about your answer because there are no right or wrong ones.

Indicate how much embarrassment, nervousness, or fear the following situations produce for you	None	A little	Quite a lot	A lot
1. Having to talk to a teacher	1	2	3	4
2. Being teased in public	1	2	3	4
3. Taking part in a play at school	1	2	3	4
4. Being with other girls I do not know	1	2	3	4
5. Singing in public	1	2	3	4
6. Going to the blackboard	1	2	3	4
7. Playing with a group of girls I do not know well	1	2	3	4
8. Asking a question in class	1	2	3	4
9. Dancing in front of people	1	2	3	4
10. Telling a friend not to take my things without permission	1	2	3	4
11. Asking something from a classmate I do not know well	1	2	3	4
12. Making a fool of myself in front of others	1	2	3	4
13. Starting a conversation with the boy I like	1	2	3	4
14. Being criticized	1	2	3	4
15. Telling a classmate I do not like something he said about me	1	2	3	4
16. Starting talking with girls I do not know	1	2	3	4
17. Telling a boy I like something about him (for example, his smile, his hair, etc.)	1	2	3	4
18. Telling a classmate not to disturb me when I am working	1	2	3	4
19. Losing my voice, stuttering, or having a breaking or trembling voice	1	2	3	4
20. Kissing the boy I like for the first time	1	2	3	4
21. Being asked a question in class by the teacher	1	2	3	4
22. Telling a classmate not to be the center of attention all the time	1	2	3	4
23. Playing a musical instrument in public	1	2	3	4
24. Asking the boy I like out for a date	1	2	3	4

© Fundacion VECA (all rights reserved). The present questionnaire could be used for clinical and research purposes without previous authorization, but citing the original source (this article). However, it can not be published (in paper, electronically or by any other means) in any language without the written permission from the Fundacion VECA.

