

Psychometric Evaluation of the Social Phobia and Anxiety Inventory for Children: Concurrent Validity and Normative Data

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Examined the relation of the Social Phobia and Anxiety Inventory for Children (SPAI-C) to the Social Anxiety Scale for Children-Revised (SASC-R). The association between the SPAI-C and the SASC-R was moderate, suggesting that the measures assess overlapping, although not identical, constructs. Initial normative data are reported on the SPAI-C for a community sample of 277 4th- through 6th-grade children. Girls reported higher social anxiety on both measures than did boys. Notably, a substantial proportion of children were found to exceed suggested cut-off scores on both measures for identifying children with high levels of social anxiety, which suggests the importance of screening elementary-age children for social fears.

According to the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV*; American Psychiatric Association [APA], 1994), social phobia is a disorder characterized by "a marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others" (p. 416). Individuals with social phobia often fear social or performance situations such as public speaking; initiating or maintaining conversations; meeting strangers, speaking to authority figures; going to parties or school; and eating, drinking, or writing in front of others (Holt, Heimberg, Hope, & Liebowitz, 1992; Pollard & Henderson, 1988; Turner & Beidel, 1989). Although most adult individuals with social phobia report a childhood history of shyness (Masia & Morris, 1998; Stemberger, Turner, Beidel, & Calhoun, 1995), social phobia typically is not diagnosed until adolescence (Bourdon et al. 1988; Herbert, 1995; Liebowitz, Gorman, Fyer, & Klein, 1985; Strauss & Last, 1993; Thyer, Parrish, Curtis, Nesse, & Cameron, 1985; Turner, Beidel, Dancu, & Keys, 1986). One reason for the apparent increase in the diagnostic prevalence for social phobia in adolescence, despite reports of lifelong shyness from adults diagnosed with the disorder, may be that young children lack the metacognitive skills to identify (and re-

port to others) associations between their subjective sense of distress and social contexts. Furthermore, social demands often increase sharply during adolescence, placing the individual more frequently in situations that may arouse anxiety.

In the child and adolescent population, social anxiety and phobia are associated with significant negative outcomes. More specifically, research indicates that social fears are related to school refusal (Last, Hersen, Kazdin, Orvaschel, & Perrin, 1991), disturbances in school performance (Beidel, 1991), substance abuse (Clark, 1993), and poor peer relations (La Greca, Dandes, Wick, Shaw, & Stone, 1988; La Greca & Stone, 1993; Vernberg, Abwender, Ewell, & Beery, 1992). Moreover, the onset of social phobia prior to age 11 is predictive of a chronic disorder in adulthood (Davidson, Hughes, George, & Blazer, 1993). Unfortunately, many parents and teachers may not recognize extreme shyness in children as a problem warranting professional attention. Additionally, although a small proportion of adolescents and adults will enter treatment when their social anxiety seriously impinges on their academic or occupational functioning, many individuals endure chronic distress for a large span of their life because they may be unaware of treatment options or unwilling to seek psychological services.

In light of (a) the typically early onset of social fears and (b) the chronicity of social phobia, research on the etiology and treatment of social anxiety is of critical importance. Unfortunately, research in this area has been restricted by the lack of measures designed specifically for assessing social anxiety in children (Beidel, Turner, & Morris, 1995; Crick & Ladd, 1993). In recent years, this cause has been advanced greatly by the development of two self-report measures designed to assess social anxiety in children: the Social

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Phobia and Anxiety Inventory (SPAI-C) and the Social Anxiety Scale for Children-Revised (SASC-R).

The SPAI-C is an empirically derived self-report instrument designed to evaluate specific somatic symptoms (e.g., "feel sweaty," "heartbeat fast"), cognitions (e.g., "what if I make a mistake and look stupid"), and behavior (e.g., avoiding social situations) across a range of potentially fear-producing situations (e.g., school play, recital, parties). Initial psychometric properties of the SPAI-C were reported by Beidel et al. (1995), and further data on the construct, convergent, and discriminant validity of the measure were reported by Beidel, Turner, and Fink (1996). Notably, the SPAI-C can differentiate children with social phobia from normal control children and from children with externalizing disorders (i.e., conduct disorder, oppositional defiant disorder, and attention deficit disorder). This is particularly important as the major limitation of existing measures is their inability to distinguish children with anxiety disorders from those with externalizing disorders (Perrin & Last, 1992). Furthermore, recent investigation of the external and discriminative validity of the SPAI-C has determined that the measure can successfully differentiate children with social phobia from those with other anxiety disorders (Beidel, Turner, Hamlin, & Morris, 1998).

Beidel et al. (1995) reported a three-factor solution for the SPAI-C where the factors represented (a) assertiveness/general conversation, (b) traditional social encounters, and (c) public performance. In further work with the SPAI-C (Beidel et al., 1996) a five-factor solution was identified: (a) assertiveness, (b) general conversation, (c) public performance, (d) physical and cognitive symptoms, and (e) behavioral avoidance. Although there was similarity in the factor structure of the SPAI-C between these investigations, differences may have arisen from differences in participant selection procedures.

The SASC-R (La Greca & Stone, 1993) and its predecessor, the Social Anxiety Scale for Children (La Greca et al., 1988) were the first psychometrically sound self-report instruments specifically developed to assess social anxiety in children. The conceptual basis of the SASC-R involves a distinction between the child's subjective experience of anxiety (e.g., thoughts, feelings) and the behavioral consequences of anxiety (e.g., avoidance, inhibition). Factor analysis of the SASC-R has yielded three primary factors representing: (a) fear of negative evaluation, (b) social avoidance and distress that is considered more general/pervasive, and (c) social avoidance and distress in new situations or with unfamiliar peers. Higher scores on the SASC-R have been found to be related to lower levels of perceived competence and to neglected and rejected peer status in fourth- through sixth-grade children (La Greca & Stone, 1993), as well as to increased

peer rejection experiences and lowered friendship quality in adolescents (Vernberg, Abwender, Ewell, & Beery, 1992). Furthermore, the SASC-R has been shown to discriminate between children with a diagnosis of simple phobia who did or did not have a comorbid diagnosis in which social anxiety was a key criterion (Ginsburg, La Greca, & Silverman, 1998).

With the availability of two psychometrically sound self-report measures of childhood social anxiety, clinicians and researchers may be faced with the task of determining which measure to use for their specific purposes. The results of this study are intended to provide information that may assist the clinician and researcher in measurement selection. The goals of the current study were (a) to provide initial normative data on the SPAI-C based on a community sample of fourth- through sixth-grade children, (b) to compare and replicate the normative data reported for the SASC-R (La Greca & Stone, 1993), and (c) to determine the relation of the SPAI-C to the SASC-R.

Method

Participants

Participants were 277 children (146 girls, 131 boys) enrolled in an elementary school in Morgantown, West Virginia. Fifty-three percent of the total sample was female. There were 94 fourth graders (49 girls, 45 boys), 92 fifth graders (51 girls, 41 boys), and 91 sixth graders (46 girls, 45 boys). The average age of participants was 10 years old (range = 9-12). Eighty-eight percent of children were European American, 6% were African American, 4% were Asian, and 2% included children of other ethnic backgrounds (e.g., Native American, Iranian, Indian). Parental consent was provided for 55.2% of the total population of 502 fourth- through sixth-grade children (28.2% refused participation and 16.5% failed to return the consent form). Boys were slightly less likely to return their consent forms than were girls (82% vs. 85.5%) and equally likely to refuse participation. The sample reflected the ethnicity proportions of the public school population in Morgantown, West Virginia. No systematic differences in participation rates were identified by ethnic status. According to school officials, the parental SES level was predominantly middle class, with approximately 25% of the sample in the lower-middle class to lower class range and approximately 15% in the upper-middle class range.

Measures

SPAI-C. The SPAI-C (Beidel et al., 1995) was developed to assess social fears in children and adoles-

cents. The measure consists of 26 items answered on a 3-point Likert-type scale ranging from 0 (*never*) to 2 (*most of the time or always*). Twelve of the 26 items ask children to rate their amount of distress in a situation for three different groups of individuals (i.e., with boys and girls I know, boys and girls I don't know, and adults). To score the SPAI-C, a mean rating is first calculated for each of the 12 items requiring multiple responses. The SPAI-C total score then is obtained by summing ratings across all 26 items. The maximum score is 52. The SPAI-C has high internal consistency and high test-retest reliability across 2-week and 10-month intervals (Beidel et al., 1995). Additional psychometric properties of the SPAI-C were described previously.

Social Anxiety Scale for Children-Revised (SASC-R). The SASC-R (La Greca & Stone, 1993) is a self-report inventory designed to assess children's feelings of social anxiety. The measure consists of 22 items that are answered on a 5-point scale ranging from 1 (*not at all*) to 5 (*all the time*). The instrument contains three subscales: (a) Fear of Negative Evaluation (FNE), consisting of 8 items (e.g., "I worry about what other kids think of me"); (b) Social Avoidance and Distress-General (SAD-G), consisting of 4 items (e.g., "I feel shy even with kids I know very well"), and Social Avoidance and Distress-Specific to New Peers and Situations (SAD-New), consisting of 6 items (e.g., "I feel shy around kids I don't know"). In addition, there are four filler questions (e.g., "I like to read"). Subscale scores are computed by summing the child's ratings for the items that pertain to the particular subscale. The SASC-R total score is calculated by adding the three subscale scores. Scores on the SASC-R may range from 18 to 90. The SASC-R has been shown to have acceptable reliability and validity (e.g., La Greca & Stone, 1993; Vernberg et al., 1992).

Procedure

All children in the fourth through sixth grades were distributed consent forms in their homeroom classrooms to take home to obtain parental consent. All children for whom parental consent was obtained completed a child assent form prior to administration of the SPAI-C and SASC-R.

The SPAI-C and SASC-R were administered in the school cafeteria or an unoccupied classroom to groups of no more than 25 children. Each administration of the self-report measures was counterbalanced across classrooms within each grade. Instructions for each inventory were explained aloud. Sample items preceded each measure to ensure that children understood the task. Individual assistance was provided to any students who experienced difficulty. Both inventories were completed in one session. The SASC-R took ap-

proximately 10 min to complete, and the SPAI-C took approximately 20 min.

Results

Normative Data

Descriptive information for the SPAI-C and SASC-R is presented in Table 1. As noted earlier, 12 of the 26 items on the SPAI-C ask the child to rate his or her amount of distress for three different groups: boys and girls I know, boys and girls I do not know, and adults. Each subgroup score was calculated by adding the ratings across areas for each group, thus yielding scores for reported anxiety in the context of familiar peers, unfamiliar peers, and adults. As examinations of differences across these three groups may have potential utility for both research and clinical practice, descriptive information is included for each. Paired samples *t* tests indicated significant differences between mean ratings for familiar peers ($M = 4.42$, $SD = 4.04$) versus unfamiliar peers ($M = 8.29$, $SD = 5.76$), $t(276) = 12.99$, $p < .001$ and between familiar peers and adults ($M = 8.36$, $SD = 5.58$), $t(276) = 13.54$, $p < .001$. No significant difference emerged between ratings of unfamiliar peers and adults.

Two-way analyses of variance (Grade \times Sex) were computed for the SPAI-C and SASC-R total scores. No significant interactions were found. A significant main effect was obtained for sex, with girls scoring higher than boys on both measures: SPAI-C: $F(1, 271) = 27.0$, $p < .001$; SASC-R: $F(1, 271) = 26.5$, $p < .001$. No main effects were observed for grade.

The developers of the SPAI-C and the SASC-R each have suggested cut-off scores that may be used to assist in the identification of children who are likely to manifest significant or clinical levels of social anxiety (18 for boys and girls on the SPAI-C, 50 for boys on the SASC-R, 54 for girls on the SASC-R). Using these suggested scores, a relatively high proportion of girls would be identified as falling in the high social anxiety range on each measure (41% for the SPAI-C, 37% for the SASC-R), whereas a lower proportion of boys would be identified (19.8% for the SPAI-C, 16.8% for the SASC-R).

Given the restricted racial and ethnic distribution of the area in which this study was conducted, we chose to compare mean scores obtained on the SPAI-C and SASC-R from our sample with those obtained from the initial published reports of the test developers (Beidel et al., 1995; La Greca & Stone, 1993). Although the La Greca and Stone sample of fourth through sixth graders was much more ethnically diverse than our sample, obtained SASC-R scores were remarkably similar (see Table 2). To our

PSYCHOMETRIC EVALUATION OF THE SPAI-C

Table 1. Descriptive Information for the SPAI-C and SASC-R Total Scores

Scale	M	SD	Minimum	Maximum	Percentile	
					25th	75th
SPAI-C Total Score						
Girls	16.51	8.92	0	40.48	9.26	21.74
Boys	11.21	7.76	0	40.50	5.20	15.85
Total	14.00	8.78	0	40.50	7.52	19.90
SPAI-C Familiar Peers						
Girls	5.22	4.34	0	24	2	8
Boys	3.53	3.47	0	16	1	5
Total	4.42	4.04	0	24	1	6
SPAI-C Unfamiliar Peers						
Girls	10.00	5.82	0	24	6	15
Boys	6.37	5.06	0	22	2	10
Total	8.29	5.76	0	24	4	12
SPAI-C Adults						
Girls	9.27	5.56	0	24	5	14
Boys	7.34	5.44	0	23	3	12
Total	8.36	5.58	0	24	4	13
SASC-R Total Score						
Girls	47.76	13.44	19	85	40	55
Boys	39.30	13.68	18	83	29	45
Total	43.76	14.18	18	85	33	53
SASC-R FNE						
Girls	23.60	6.51	8	40	19	27
Boys	19.93	6.05	8	40	16	24
Total	21.87	6.55	8	40	17	26
SASC-R SAD-G						
Girls	9.15	3.36	4	20	7	11
Boys	7.55	3.35	4	20	5	9
Total	8.39	3.45	4	20	6	10
SASC-R SAD-New						
Girls	16.60	4.76	6	27	13	20
Boys	14.31	4.76	6	28	11	17
Total	15.51	4.88	6	28	12	19

Note: N = 277 (131 boys, 146 girls). SPAI-C = Social Phobia and Anxiety Inventory for Children; SASC-R = Social Anxiety Scale for Children-Revised; FNE = Fear of Negative Evaluation subscale; SAD-G = Social Avoidance and Distress-General subscale; SAD-New = Social Avoidance and Distress-Specific to New Peers and Situations subscale.

Table 2. Comparison of SASC-R and SPAI-C Scores Across Community Samples

Study Sample	N	SASC-R							
		FNE		SAD-G		SAD-New		SPAI-C	
		M	SD	M	SD	M	SD	M	SD
La Greca & Stone (1993) ^a	459	21.46	6.74	8.03	3.27	16.21	4.70	—	—
Morris & Masia (1998) ^b	277	21.87	6.55	8.39	3.45	15.51	4.88	14.00	8.78
Beidel et al. (1995) ^c	25	—	—	—	—	—	—	13.74	8.50

Note: SASC-R = Social Anxiety Scale for Children-Revised; FNE = Fear of Negative Evaluation subscale; SAD-G = Social Avoidance and Distress-General subscale; SAD-New = Social Avoidance and Distress-Specific to New Peers and Situations subscale; SPAI-C = Social Phobia and Anxiety Inventory for Children.

knowledge, this is the first investigation in which the SPAI-C has been administered to a large unselected community sample. However, Beidel et al. (1995) incorporated a sample of 25 normal control children (mean age 10.9 years) and reported a mean score similar to that obtained in this investigation (see Table 2).

Relation of SPAI-C to SASC-R

The SPAI-C total score was significantly but moderately correlated with the SASC-R total score, $r(277) = .63, p < .001$. Correlations between the SPAI-C and SASC-R total scores, the SASC-R subscales, and the SPAI-C item subsets (familiar

Table 3. Zero-Order Correlations Among SPAI-C and SASC-R Scores

Scale	1	2	3	4	5	6	7
SPAI-C							
1. Total Score							
2. Familiar Peers	.75						
3. Unfamiliar Peers	.82	.54					
4. Adult	.78	.53	.63				
SASC-R							
5. Total Score	.63	.47	.47	.38			
6. FNE	.57	.47	.44	.36	.84		
7. SAD-G	.53	.38	.35	.34	.83	.61	
8. SAD-New	.59	.41	.47	.35	.86	.64	.65

Note: $N = 277$. All correlations significant at $p < .001$. SPAI-C = Social Phobia and Anxiety Inventory for Children; SASC-R = Social Anxiety Scale for Children-Revised; FNE = Fear of Negative Evaluation subscale; SAD-G = Social Avoidance and Distress-General; SAD-New = Social Avoidance and Distress-Specific to New Peers and Situations.

peers, unfamiliar peers, and adults) are presented in Table 3.

To examine further the relation between the measures, children were divided into groups according to their scores on each instrument. Children who obtained SPAI-C total scores in the upper quartile (score > 20) were assigned to the Hi-SPAI-C group ($n = 70$) and children who obtained SPAI-C total scores in the lowest quartile (score < 8) were assigned to the Lo-SPAI-C group ($n = 69$). Children who obtained SASC-R total scores in the upper quartile (score > 52) were assigned to the Hi-SASC-R group ($n = 69$), and children who obtained SASC-R total scores in the lowest quartile (score < 33) were assigned to the Lo-SASC-R group ($n = 69$).

The ability of each measure to correctly classify children scoring in the upper and lower quartiles on the other measure was tested with discriminant function analyses. Referring to the ability of the SASC-R total scores to distinguish the Hi-SPAI-C from the Lo-SPAI-C group, the resultant discriminant function was significant, $\chi^2 = 91.7, p < .001$. For the ability of the SPAI-C total scores to distinguish the Hi-SASC-R from the Lo-SASC-R group, the resultant discriminant function analysis also was significant, $\chi^2 = 84.3, p < .001$.

With regard to correspondence between the measures for children reporting low levels of social anxiety, 46 of the 69 members of the Lo-SASC-R group also were classified as members of the Lo-SPAI-C group, 22 fell within the middle range of the SPAI-C, and 1 was classified as a member of the Hi-SPAI-C group. Likewise, of the 69 members of the Lo-SPAI-C group, 46 were classified as members of the Lo-SASC-R group, 18 fell within the middle range of the SASC-R, and 5 were classified as a member of the Hi-SASC-R group.

Conversely, in relation to correspondence between the measures for children reporting high levels of social anxiety, 38 of the 69 members of the Hi-SASC-R group also were classified as members of the Hi-SPAI-C group, 26 fell within the middle range of

the SPAI-C, and 5 were classified as a member of the Lo-SPAI-C group. Likewise, of the 70 members of the Hi-SPAI-C group, 38 were classified as members of the Hi-SASC-R group, 31 fell within the middle range of the SASC-R, and 1 was classified as a member of the Lo-SASC-R group. Considering all possible combinations, the overall classification correspondence between the two measures was 63%.

Discussion

This investigation was the first to provide initial normative data for the SPAI-C based on a large community sample, as well as the first to examine the relation of the SPAI-C to the SASC-R. Although the grade range for the sample in this study (fourth through sixth) allows for replication and direct comparison of results reported by La Greca and Stone (1993) for the SASC-R, note that the normative information presented for the measures may not be generalizable to other age groups. Both measures have an approximately third-grade reading level and thus would not be intended for use with children much younger than that in this sample. Research utilizing the SPAI-C with junior high school populations remains to be conducted, thus descriptive information is not available for that age range. However, the SASC-R has been used with junior high school populations (e.g., Vernberg et al., 1992) and research has been conducted with an adolescent version of the instrument (Inderbitzen, Walters, & Bukowski, 1997). The reader is referred to La Greca (1998) for normative information on early adolescent samples. Furthermore, note that the demographic distribution of this sample is not reflective of the general United States population of mid- to late-elementary-age children, although comparison with results obtained from prior published research on each measure indicated comparable self-reported levels of anxiety across samples.

With regard to use of the SPAI-C and SASC-R as screening measures, a large proportion of children exceeded the suggested cut-off score for each measure.

study points to the importance of assessing social fears in elementary-age children, as early identification may assist in the development of early intervention and prevention efforts. However, it is unlikely that the majority of children exceeding the suggested cut-off scores for each measure actually would meet full diagnostic criteria for social phobia. Note that cut-off scores are merely guidelines and should be adjusted according to whether one's purposes are more related to maximizing inclusion of all individuals who may be at risk for a disorder (and thereby increasing the false positive rate) or to identifying a smaller sample of individuals who most probably will meet criteria for the disorder (and thereby increasing the false negative rate). It is common practice for clinical cut-off scores to be derived by determining the score at which false positives and false negatives are minimized in distinguishing between clinical groups that meet criteria for specific disorders and comparison groups of individuals who do not meet criteria for any diagnosis. Differences in perceptions of intensity, frequency, and severity between community samples and clinical samples may affect overall scores on self-report measures. Unfortunately, individuals included in clinical samples may have become accustomed to relatively high symptom levels and this may affect level of item endorsement on Likert-type measures. Likewise, the "no diagnosis" comparison groups selected for inclusion in many clinical investigations may represent individuals with abnormally low levels of subjective distress. Test developers may do well to report separate cut-off scores for clinical and community samples as the positive predictive power of various scores may differ by sample type. Furthermore, sex differences in mean scores for the SPAI-C may suggest the need for separate cut-off scores for boys and girls. Despite reports of roughly equivalent sex distribution of adult social phobia in clinic samples (e.g., Turner & Beidel, 1997), among child clinic samples it is common for more girls to present with social phobia than boys (e.g., Beidel & Turner, 1992). Thus it may be more relevant that cut-off scores correspond to meaningful symptom levels than that they be set to identify equivalent proportions of children by sex. At any rate, it is imperative that clinicians not rely on scores of single measures to generate diagnoses. Ideally, diagnoses should be derived based on information obtained from multiple sources (e.g., parent, teacher, child) as well as through multiple methods (e.g., diagnostic interview, direct observation). Elevated scores on self-report questionnaires are not synonymous with diagnostic status.

Overall, results of this study support the concurrent validity of the SPAI-C and SASC-R. A moderate association was found between total scores for both measures. However, lack of perfect correspondence suggests that, although similar, the two instruments do not assess identical constructs. To illustrate, despite

the surface similarity between the SAD-G and SAD-N subscales of the SASC-R and the familiar and unfamiliar item subsets of the SPAI-C, the pattern of correlations across the measures is not surprising. In contrast to the SPAI-C, which asks children about their anxiety with both unfamiliar and familiar peers in 12 of the same situations, none of the situations included in the SAD-N are also included in the SAD-G. For many of the SASC-R items, the closeness of peers is ambiguous and must be interpreted by the child being assessed. Therefore, unlike the SPAI-C, the SASC-R does not allow for a direct comparison of anxiety experienced with unfamiliar versus familiar peers versus adults in a given situation.

Another explanation for the moderate association between the SPAI-C and SASC-R may be the fact that the developers of the SPAI-C intended the measure to assess the construct of social phobia as defined in the *DSM-IV*, whereas the developers of the SASC-R intended the measure to assess the construct of social anxiety in general. Social anxiety, although similar to social phobia, is characteristic of many disorders (e.g., obsessive-compulsive disorder, generalized anxiety disorder, borderline personality disorder, eating disorders) and is considered to be less severe than social phobia.

With regard to relative merits of the SPAI-C and SASC-R, assessment protocols utilizing both measures may allow for more comprehensive information gathering with respect to social anxiety. However, if the clinician or researcher is unable to incorporate both measures in their assessment protocol (e.g., due to time considerations) careful consideration should be given to the goal in relation to differential information that may be obtained from each measure (e.g., only the SPAI-C allows for assessment of physical symptoms, whereas the SASC-R appears to more thoroughly assess worry/fear of negative evaluation). Although further research is necessary on the differential merits of the SPAI-C and SASC-R, one might expect the SPAI-C to have relative merit in terms of treatment planning and measuring treatment effects as the items are more specific to symptomatology than those on the SASC-R. For example, the SPAI-C includes an evaluation of specific physiological, cognitive, and behavioral symptoms in various social situations (e.g., "I think I will make a mistake and goof up," "My heart beats faster," "I try to avoid parties."). In contrast, considering the minimal time required to complete the SASC-R (approximately 10 min, as compared with 20 min for the SPAI-C), the measure may have relative merit over the SPAI-C as a screening tool or index variable for large community samples.

Although the initial findings are promising, further research on the differential utility of the SPAI-C and SASC-R is needed. Additional studies should evaluate the usefulness of the measures as screening tools, clini-

cal assessment devices, and treatment outcome measures. For example, structured diagnostic interviews could be administered along with the SPAI-C and SASC-R to determine the sensitivity and specificity of each measure with regard to predicting diagnoses of social phobia. In addition, to examine sensitivity to change, both measures could be used in evaluating the treatment progress of children with social phobia. With regard to etiological research, future investigations might include behavioral observations (e.g., in school playground or classroom) and conduct comparisons of children's observable behaviors with their responses on the self-report measures and assess how these variables relate to the development of anxiety disorders. Finally, in comparison to the first generation of self-report measures, which tended to assess general levels of distress or negative affectivity, new measures are increasingly challenged to assess specific constructs and to demonstrate discriminant validity across clinical groups. The SPAI-C and SASC-R appear to have met this challenge with respect to social anxiety in childhood.

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