

# SYMPTOMATIC AND FUNCTIONAL ASSESSMENT OF SOCIAL ANXIETY DISORDER IN ADULTS

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Social anxiety disorder (SAD) (also called *social phobia*; herein the terms are used interchangeably) was first officially classified as a psychiatric disorder with the publication of the DSM-III.<sup>1</sup> SAD has been termed "the neglected anxiety disorder" because it is often missed as a diagnosis and trivialized professionally and societally.<sup>31</sup> The recognition of SAD as an important and emerging disorder has led to rapidly growing literature on its epidemiology, assessment, and treatment.

SAD often has a childhood onset and a persistent course. SAD can be classified as generalized and nongeneralized. *Generalized SAD* refers to a subtype in which significant social anxiety occurs in most social situations, including performance and interpersonal situations (e.g., maintaining conversations; dating; and speaking to authority figures, strangers, or small groups).<sup>2</sup> Persons who meet criteria for nongeneralized (specific) SAD experience significant social anxiety in one or two social situations (e.g., public speaking, examination, writing, or using public restrooms).<sup>2</sup> Patients presenting for treatment of nongeneralized SAD, upon detailed questioning, often are found to have more generalized symptoms. Measures of generalized social anxiety are of limited usefulness for assessing severity of nongeneralized SAD, for which assessment focused on the particular feared situation is likely to be more relevant and more helpful in assessing change with treatment.

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SAD is a very prevalent disorder with high comorbidity, but it is poorly recognized in clinical settings.<sup>47</sup> One epidemiologic study<sup>16</sup> reported that only 3% of persons with SAD had received treatment for it in any medical setting in the past year. SAD significantly increases the risk for the development of other anxiety disorders, depression and substance abuse, with subsequent comorbidity being common. Patients presenting with these conditions should be assessed for SAD, which will often be camouflaged by these other disorders. It is prudent to "hunt" for SAD when patients present with anxiety, depression or substance abuse because it may contribute to dysfunction and require specific treatment. SAD is strongly associated with functional impairment, feelings of social isolation, and suicidal ideation. A recent study<sup>41</sup> reported that SAD is associated with a distinct pattern of features (e.g., financial obstacles, uncertainty over where to go for help, and fear of what others might think or say) that prevent subjects from seeking treatment.

In the treatment of any psychiatric disorder, it is useful to supplement the clinical interview with psychometric tools to assess symptoms and monitor changes over time. This article reviews clinical assessment issues and tools for the assessment of SAD that currently exist in the literature, including (1) self-rated scales, (2) interviewer-rated scales, (3) tools for nongeneralized SAD, and (4) tools for disability assessment due to SAD. This article concludes with discussion and suggestions for future research and development of assessment tools for SAD.

## THE CLINICAL INTERVIEW

The clinical interview is the cornerstone of effective treatment. Despite rapid advances in the understanding of the psychopathology and pathophysiology, as well as the development of, effective treatments, it is still the relationship with a caring clinician that is vital to the patient. Clinicians must be sensitive to the distress that many socially anxious individuals experience in coming to their first interview with a new clinician. Physical examination can be a disturbing experience for patients with SAD because it represents another instance of scrutiny,<sup>56</sup> so fears should be explored with all socially anxious patients before seemingly routine physical examinations are conducted. Patients often evidence trembling, blushing, sweating, and avoidance of eye contact. In some instances, their discomfort is so great that they cancel or simply fail to attend a first appointment, although they want help desperately. Others may prime themselves with alcohol or tranquilizers.

Greater space between patient and interviewer may increase comfort for socially anxious patients. It is also desirable that there will be no disturbance (e.g., telephone calls or knocks on the door) during the interview and that reasonable time is permitted.<sup>12</sup> Patients value feeling that the interview has been unhurried and that they have been the center of the clinician's undivided attention.

Being nonjudgmental is especially important when interviewing

individuals with SAD because they may be sensitive to rejection or being judged. Open-ended questions, such as "What is the nature of your difficulty?" or, more simply, "How can I help?" leave patients free to lead, and they convey respect for the patients' ability to communicate as a partner in the process of defining their disorder. Sometimes, however, open-ended questions are difficult for the individual with SAD because such questions keep them "on stage" longer. Selective use of directed questions to help take the distressed patient "off the hook" also demonstrate empathy and compassion.

## **ASSESSMENT TOOLS**

This section focuses on tools for assessment of symptoms of generalized and nongeneralized SAD in adults and for assessment of disability due to SAD. Scales that are commonly used in clinical settings and research are reviewed here. Important psychometric considerations include the ability of scale ratings to differentiate patients with and without diagnosis; internal consistency of items composing a scale; reliability of ratings between raters and over time; and validity, as established by comparison with other assessments. Its is also valuable for a scale to be sensitive to change, with active treatment versus a control group in research studies.

### **Self-Rated Scales**

Self-rated scales have some advantages over interviewer-rated scales, including ease of administration and lower expense. Questions are uniformly presented, and results are therefore directly comparable among subjects across time for a given patient, as well as between subjects, assuming that they have a common understanding of the scale. Questionnaires can be administered in a waiting area, at home, or even on the Internet without clinicians' involvement. However, although self-ratings are extremely helpful, the authors caution against sole reliance on them to determine diagnosis or severity.

### **Fear of Negative Evaluation Scale and Social Avoidance and Distress Scale**

The Fear of Negative Evaluation (FNE) scale and the Social Avoidance and Distress (SAAD) scale<sup>62</sup> are early scales, developed before the publication of the DSM-III. The FNE is a 30-item scale with true-false format that measures expectations of negative evaluation, avoidance of evaluative situations, apprehension about others' evaluation, and distress related to negative evaluations. Examples are "I become tense and jittery when I know someone is sizing me up," and "I am afraid people

will find fault with me." The SAAD is a 28-item scale that measures social avoidance and subjective distress. Examples are "I often find social occasions upsetting," and "I tend to withdraw from people." The maximum score is 30 on the FNE and 28 on the SAAD. Normative data in a college sample has been reported by Watson and Friend,<sup>62</sup> who found mean scores of 15.5 (FNE) and 9.1 (SAAD) and a median of 16.0 (FNE) and 7.0 (SAAD). Both scales have been studied in clinical samples.<sup>4, 14</sup>

### *Internal Consistency and Reliability*

The FNE and SAAD scales have shown internal consistency by mean biserial correlations (FNE,  $r = 0.72$ ; SAAD,  $r = 0.77$ ) in eight college student samples,<sup>62</sup> while Cronbach's alpha was 0.94 for both measures in a clinical sample.<sup>40</sup> One month test-retest reliability in eight college student samples yielded good results for the SAAD scale ( $r = 0.68-0.79$ ) and satisfactory results for the SAAD scale ( $r = 0.68-0.79$ ). No information is available on FNE test-retest reliability.

### *Validity*

In clinical samples,<sup>3, 27, 52</sup> the FNE and SAAD scales demonstrated high correlations with other measures of social anxiety (Social Phobia and Anxiety Inventory (SPAI)-FNE,  $r = 0.55$ ; SPAI-SAAD,  $r = 0.77$ ), indicating good convergent validity. In a clinical sample, the FNE and SAAD scales showed lower but significant correlations with dissimilar measures: State-Trait Anxiety Inventory (STAI;  $r = 0.50-0.63$ ), Beck Depression Inventory (BDI;  $r = 0.42-0.55$ ), and the total Symptom Checklist-90 ( $r = 0.49-0.55$ ) scores. Adequate, criterion-related validity to the diagnosis of generalized SAD has been reported for the FNE and SAAD scales.

### *Treatment Sensitivity*

Several studies report that the FNE and SAAD scales are able to detect change with psychological and pharmacologic treatment.<sup>9</sup>

### *Summary and Clinical Applications*

The FNE and SAAD scales have been studied in both college student and clinical samples. They show adequate psychometric properties but relatively weak divergent validity. Both scales are able to detect change with treatment, but the yes-no format may not have the precision of Likert-type scales. A brief version of the FNE scale that addresses this limitation has been developed.<sup>30</sup> The FNE is frequently used as a measure of cognitive symptoms, but inspection of its items suggest that it confounds the assessment of cognition and anxiety. The scales can be

used for screening and cognitive-behavioral therapy outcomes research studies.

## Fear Questionnaire

The Fear Questionnaire (FQ)<sup>38</sup> was developed to assess severity of common phobias (i.e., agoraphobia, blood-injury phobia, and social phobia). It contains a 15-item total phobia scale and 5 items for each phobia subscale. The FQ scale also contains a separate 5-item anxiety and depression scale and 1-item global phobic distress index scale. Total phobia score is rated on a scale ranging from "would not avoid it" (0) to "always avoid it" (8). Scores range from 0 to 120 for the total phobia scale. Scores for the anxiety and depression scale range from 0 to 40 and, for the global phobic distress index scale, 0 to 8.

Normative data on the scale have been studied and reported. Mizes and Crawford<sup>39</sup> studied a large sample consisting of high school students ( $n = 216$ ), college students ( $n = 184$ ) and adults ( $n = 172$ ). Total phobia scale means and SD by group and gender are as follows: high school students (for males, mean = 23.9, SD = 16.6; for females, mean = 30.3, SD = 17.1); college students (for males, mean = 27.7, SD = 13.7; for females, mean = 33.6, SD = 13.1) and adults (for males, mean = 26.1, SD = 16.1; for females, mean = 23.9, SD = 15.8). Another study<sup>40</sup> looked at samples of college students ( $n = 251$ ) and a community sample ( $n = 111$ ) and showed the total phobia score to be 27.7 (SD = 13.3) for the college students and 40.5 (SD = 16.2) for the community sample.

### *Internal Consistency and Reliability*

The FQ has demonstrated good internal consistency with Cronbach's alphas ranging from 0.83 to 0.86 for the total phobia scale and from 0.71 to 0.83 for the three phobia subscales in large samples<sup>40</sup> of patients with anxiety disorders. In nonclinical samples, Cronbach's alpha has been reported at 0.44 to 0.78. Correlation coefficients ranging from 0.82 to 0.96 across all subscales have been reported for 1-week test-retest reliability. Good test-retest stability for the three phobia subscales was also found for longer intervals of 2 to 10 weeks ( $r = 0.73$ – $0.86$ ) and 3 to 16 weeks ( $r = 0.84$ – $0.86$ ).

### *Validity*

The social phobia subscale of the FQ has shown moderate to good convergence with the SPAI and SAAD ( $r = 0.42$ – $0.65$ ). The FQ total phobia scale and three subscales have demonstrated lower to moderate correlations ( $r = 0.25$ – $0.44$ ) with dissimilar measures of anxiety and depression, including the BDI, STAI, and the Anxiety Sensitivity Index in both clinical and nonclinical samples.

### *Treatment Sensitivity*

Studies have demonstrated that the FQ is able to detect change over time in psychotherapy and pharmacotherapy outcome studies.<sup>21, 34, 43, 57</sup>

### *Summary and Clinical Applications*

The FQ is a widely used tool for assessing agoraphobia, blood-injury phobia, and social phobia. The social phobia subscale is useful for treatment outcomes studies. One study<sup>23</sup> reported that patients with generalized and nongeneralized (public speaking) fears did not differ on the social phobia subscale.

## **Social Phobia Scale and Social Interaction Anxiety Scale**

The Social Phobia Scale (SPS) and Social Interaction Anxiety Scale (SIAS)<sup>35, 23</sup> are similarly designed. Both have items rated on a 5-point Likert scale (0 = not at all characteristic of me; 4 = extremely characteristic or true of me). The SPS was developed to measure anxiety related to being observed by other people (e.g., public speaking, writing, and eating). Example items are "I feel awkward and tense if I know people are watching me," and "I fear I may blush when I am with others." The SIAS was designed to assess anxiety in social interactional situations, such as initiating and maintaining conversations with friends, strangers, or potential mates. Items reflect cognitive, behavioral, and affective responses to social interaction situations. Example items from the SIAS are "I become tense if I have to talk about myself or my feelings," and "When mixing socially, I am uncomfortable."

### *Internal Consistency and Reliability*

Internal consistency with Cronbach's alpha has been reported to range from 0.89 to 0.94 for the SPS and 0.89 to 0.93 for the SIAS.<sup>24, 37</sup> Test-retest reliabilities of 0.91 for the SPS and 0.93 for the SIAS after intervals of 3 to 13 weeks in small samples of untreated SAD have been reported.

### *Validity*

Convergent validity has been reported, showing high correlations ( $r = 0.53\text{--}0.73$ ) of the SPS with other measures of primarily performance-related anxiety and of the SIAS ( $r = 0.56\text{--}0.88$ ) with other measures of social interactional anxiety.<sup>9</sup> One study found that the SPS and SIAS are strongly associated with the SPAI total SPS and social phobia scores ( $r = 0.64\text{--}0.78$ ). Divergent validity has been reported with measures of other anxiety symptoms, the Anxiety Sensitivity Index and the Penn State

Worry Questionnaire, with which correlations ranged from 0.41 to 0.55. High criterion validity relative to the diagnosis of SAD has been reported for both the SPS and SIAS, although the SPS failed to separate SAD from panic disorder.<sup>22</sup>

### *Treatment Sensitivity*

Both scales have shown sensitivity to change with psychological treatment, including exposure therapy and cognitive restructuring.<sup>9</sup> It has also been used in a pharmacotherapy outcomes study.<sup>26</sup>

### *Summary and Clinical Application*

Both scales are moderately short and easy to score. They have some appeal as an attempt to separately measure fears of social interaction versus scrutiny, but their utility in clinical and research practice requires additional study.

## **Social Phobia and Anxiety Inventory**

The SPAI<sup>55</sup> was developed as a self-rated scale to assess cognitive, behavioral, and avoidance symptoms of SAD as described in DSM-III. It is very comprehensive, consisting of a 32-item social phobia scale and a 13-item agoraphobia scale. Each item is scored on a Likert scale from 1 to 7. Of the 32 social phobia items, 21 assess distress in four types of social settings (with strangers, authority figures, the opposite sex, and people in general). Other social phobia items assess cognitive and behavioral symptoms in anticipation of or during social situations. The social phobia scale also measures frequency of avoidance or escape from social situations. The agoraphobia scale assesses the extent to which respondents experience fear of panic attacks, concerns about being trapped, and other agoraphobic fears—reactions that can lead to distress in social situations but that are not related to a fear of negative evaluation characteristic of SAD. Scores range from 0 to 192 for the social phobia scale and from 0 to 78 for the agoraphobia scale. The SPAI social phobia score is calculated by subtracting the agoraphobia score from the social phobia score.

### *Internal Consistency and Reliability*

Examination of internal consistency in adolescents, college students, and patients with SAD<sup>42, 53</sup> has shown Cronbach's alpha ranging from 0.95 to 0.96 for the social phobia scale and 0.85 to 0.95 for the agoraphobia scale. Two-week test-retest reliability for the SPAI difference score has been reported ( $r = 0.86$ ).

### *Validity*

Convergent validity<sup>3, 4, 14</sup> ( $r = 0.51-0.79$ ) has been reported for both the SPAI distress score and social phobia score with other measures of SAD, including social phobia subscale of the FQ, FNE, and SAAD. It has shown weaker associations with measures that assess dissimilar anxiety symptoms and depression. For example, the distress score and social phobia score have shown low to moderate correlation with the agoraphobia scale of the FQ ( $r = -0.15-0.42$ ), the trait scale of the STAI ( $r = 0.36$  and  $0.45$ ), Hamilton Anxiety Scale (HAM-A;  $r = 0.27$ ), and the BDI ( $r = 0.20$  and  $0.33$ ). The SPAI has also demonstrated good content validity for the DSM construct of SAD in adolescents, college students, and patients with SAD.<sup>54</sup> It has also shown good criterion-related validity with diagnosis of SAD ( $r = 0.87$ ) in a recent small study.<sup>44</sup>

### *Treatment Sensitivity*

In a study ( $N = 61$ ) of behavior therapy, atenolol, and placebo, Beidel et al<sup>3</sup> reported that the SPAI was more sensitive to change with treatment than either the FNE or the SAD. Another study<sup>14</sup> also reported sensitivity to greater change with the effects of clonazepam versus placebo treatment. A recent study<sup>57</sup> reported greater change with sertraline versus placebo.

### *Summary and Clinical Applications*

The SPAI is a well-studied scale in both community and clinical samples and possesses good psychometric properties. The scale provides comprehensive information on the type and severity of social anxiety symptoms and is able to differentiate those with SAD from those with agoraphobia. It can be helpful for monitoring change, but it is too long for screening purposes and not simple to score, although computerized scoring is available. The high internal consistency suggests that some of the SPAI items may be redundant; however, the advantages of a highly reliable instrument are considerable.

### **Social Interaction and Self-Statement Test**

The Social Interaction and Self-Statement Test (SISST)<sup>18</sup> was developed to assess cognitions when interacting with the opposite sex. The scale consists of 15 positive and 15 negative self-statements about social interactions, with a yes-no response format. Items in this scale are derived from thought listings of a large student sample in response to frequently occurring problematic heterosocial situations. Examples are: "I can usually talk to girls/boys pretty well," "She/he probably won't be interested in me," and "What the heck, the worst that can happen is that she/he won't go for me." Studies have shown that SISST can

differentiate between people who are anxious about public speaking and controls, possibly because many of the SISST items are also relevant for the speech situation. The scale's authors suggest that scale can be used for public speaking as well as heterosocial situations. This scale has good psychometric properties.

### **Social Phobia Inventory**

The Social Phobia Inventory (SPIN)<sup>10</sup> is a recently developed, self-rated scale based on the interviewer-rated Brief Social Phobia Scale (BSPS), which was developed to fill the need for a short, easily administered and scored self-rating that captures fear, avoidance, and physiologic symptoms. The latter are a neglected but important domain of SAD, often being the reason why patients seek treatment.<sup>60</sup> This 17-item scale consists of items on fear and avoidance in a variety of social situations and a subscale rating physiologic arousal symptoms (e.g., blushing, sweating, palpitations, shaking, and trembling). Each item is rated from 0 (not at all) to 4 (extremely). The full-scale score ranges from 0 to 68. Psychometric properties of SPIN have been reported in both healthy controls and psychiatric patients with and without SAD. It has also been evaluated in the treatment outcomes studies.<sup>10</sup>

#### *Internal Consistency and Reliability*

The SPIN has shown good internal consistency with Cronbach's alpha of 0.82 to 0.90 for two control samples and 0.87 to 0.94 for two pharmacotherapy samples.<sup>10</sup> Respective coefficients for baseline subscale scores for SAD subjects and controls were as follows: fear, 0.68 to 0.76 versus 0.76 to 0.79; avoidance, 0.70 versus 0.70 to 0.81; and physiologic, 0.70 to 0.73 versus 0.57 to 0.68. Test-retest reliability has been reported in the same study of pharmacotherapy samples with the correlation coefficient ranging from 0.78 to 0.89.

#### *Validity*

Convergent validity has been reported<sup>10</sup> for the SPIN, with significant correlations against the BSPS, Liebowitz Social Anxiety Scale (LSAS), and FQ social phobia subscale:  $r = 0.66, 0.55, \text{ and } 0.77$ , respectively. No significant correlation coefficient has been found with the Sheehan Disability Scale and general health score of the Short Form-36 (SF-36). The scale was also able to differentiate patients with SAD, who had a mean total SPIN score of 41.1, and normal controls, with a total SPIN score of 12.9. Construct validity of the scale relative to the interviewer-based Clinical Global Impression (CGI) and interviewer-rated global improvement CGI-I has also been reported<sup>10</sup> between patients with SAD and patients without SAD, with correlation of  $r = 0.56$  to 0.74.

### *Treatment Sensitivity*

The SPIN has demonstrated sensitivity to the reduction in symptoms over time and discrimination between treatments of different efficacy in two large samples.<sup>43, 48</sup> Effect size comparisons have been studied and reported<sup>10</sup> in two samples. These were 0.68, 0.42, 0.67, 0.66, and 0.69 for the BSPS, LSAS, CGI-S, SPIN, and Patient-Rated Global Improvement scales, respectively, whereas they were 0.51, 0.40, 0.44, and 0.44 for the BSPS, CGI-S, SPIN, and Patient-Rated Global Improvement scales, respectively, in another sample.

### *Clinical Applications*

The SPIN is a relatively new but well-studied self-rated scale that not only covers all three clinically important domains of SAD but also the simplicity and ease of scoring of which make it an appealing instrument. It can be used as a valid measure of severity of social anxiety symptoms. It has also been used extensively on the Internet by the general public.

A particularly interesting, and potentially promising, aspect of the SPIN is a three-item screener for diagnosing generalized SAD, derived from the full scale. The three items are "My fear or embarrassment causes me to avoid doing things or speaking to people," "I avoid activities in which I am the center of attention," and "Being embarrassed or looking stupid are my worst fears." This screener, the Mini-SPIN, appears to possess good sensitivity (88.7%), specificity (90.0%), and diagnostic accuracy (89.9%).<sup>11</sup>

## **Interviewer-Rated Scales**

### *Liebowitz Social Anxiety Scale*

The LSAS<sup>32</sup> is an interviewer-rated scale designed to assess both social interaction and performance-related anxiety as well as fear and avoidance. The items are scored on separate scales ranging from 0 to 3 for fear or anxiety and avoidance. There are 13 performance items that include questions about telephoning in public and giving a report to a group, as well as 11 social-interaction items that include such things as returning goods to a store and giving a party.

**Internal Consistency and Reliability.** The LSAS has demonstrated good internal consistency, with Cronbach's alpha ranging from 0.82 to 0.92.<sup>29</sup> In a large sample<sup>25</sup> (N = 382), Cronbach's alpha coefficients for all LSAS scores were uniformly high: 0.96, 0.92, and 0.92 for LSAS-total, LSAS-fear, and LSAS-avoidance, respectively. To the best of the authors' knowledge, there is no information available on test-retest and inter-rater reliability.

**Validity.** The LSAS total score was found to be highly correlated with the SPAI ( $r = 0.87$ ) and BSPS ( $r = 0.76$ ).<sup>14</sup> The LSAS avoidance and fear scales were found to be strongly associated with social anxiety measures assessing related constructs, such as the SIAS ( $r = 0.75$ – $0.76$ ) and SPS ( $r = 0.61$ – $0.64$ ), indicating good convergent validity.<sup>29</sup> The LSAS total score was correlated with the SIAS but not with the Anxiety Disorder Interview Schedule, Clinician's Severity Rating, or FNE.<sup>24</sup> The discriminant validity of the LSAS with the HAM-A, Hamilton Depression Scale (HAM-D), and the BDI has been reported in one sample.<sup>12</sup> With regard to content validity, the LSAS assesses relevant situations for individuals with SAD, including performance (e.g., eating in public) and interactional (e.g., giving a party) situations. High criterion validity to the diagnosis of SAD has been reported for the LSAS.<sup>25</sup>

**Treatment Sensitivity.** The scale has been studied and reported in group cognitive-behavioral therapy outcomes for SAD and in pharmacotherapy outcomes studies.<sup>11, 24, 29, 39, 51, 67</sup> Effect sizes within treatment have been reported<sup>25</sup> to be 1.1 to 1.4, whereas effect sizes between drug treatment versus placebo for the LSAS subscales range from 0.58 to 0.67. The LSAS has also been employed in many other recent pharmacotherapy outcomes studies.<sup>17, 43, 48, 50</sup>

**Summary and Clinical Applications.** The LSAS assesses both anxiety and avoidance in a broad range of social situations. It is easy to administer and appears to be a useful tool for assessment of SAD and tracking treatment progress. This scale is also being tested in a self-report format. The LSAS has been used in several studies with relatively large samples of SAD patients. It has also been studied cross-culturally.<sup>8</sup> It is the most widely used interviewer-rated scale.

### *Brief Social Phobia Scale*

The BSPS<sup>14, 15</sup> is an 11-item, clinician-rated scale of SAD. It contains seven social anxiety situations rated on a 0-to-4 scale for both fear and avoidance. In addition, there is a physiologic symptom subscale containing four items (scored from 0–4). The subject is asked to rate "when you are in a situation that involves contact with other people, or when you are thinking about such situation." The BSPS appears to have adequate content validity in that it captures the most common situations feared by treatment-seeking persons with SAD as well as typical symptoms associated with SAD.

**Internal Consistency and Reliability.** Psychometric properties of BSPS have been studied and reported in small and large samples. Internal consistency with Cronbach's alpha range from 0.78 to 0.86 for the BSPS-Fear (BSPS-F), BSPS-Avoidance (BSPS-A), and BSPS-Physiological (BSPS-P).<sup>14</sup> In a large sample<sup>15</sup> ( $N = 275$ ), examination of internal consistency of the BSPS in treatment-seeking persons with DSM-III-R SAD yielded an acceptable Cronbach's alpha of 0.81 for the BSPS-Total (BSPS-T), 0.70 for BSPS-F, 0.78 for BSPS-A, and 0.60 for BSPS-P. Inter-rater reliability has been reported in a small sample<sup>14</sup> ( $N = 23$ ), with correla-

tion coefficients of 0.91, 0.74, 0.89, 0.83 for total, fear, avoidance, and physiologic symptoms, respectively. One-week test-retest reliability in a large sample ( $N = 136$ ) of persons with DSM-III-R SAD was good; correlation coefficients ranged from 0.77 for the BSPS-P to 0.91 for the BSPS-T.<sup>14, 15</sup>

**Validity.** In a large sample<sup>15</sup> ( $N = 275$ ), the BSPS-T score has shown significant correlation with other measures of social anxiety and phobia, including the LSAS ( $r = 0.70$ ) and FNE ( $r = 0.43$  and  $0.51$ ). As would be expected, associations between the BSPS and HAM-A, a measure of general as opposed to social anxiety, were notably lower ( $r = 0.20$ – $0.34$ ). With the exception of the BSPS-P, the BSPS was strongly related ( $r = 0.49$ – $0.55$ ) to interference with the domain of social life as assessed with the Sheehan Disability Scale.<sup>15</sup>

**Treatment Sensitivity.** The BSPS has shown sensitivity to change with pharmacotherapy of SAD. The BSPS has been employed in many pharmacotherapy outcomes studies.<sup>13, 17, 43, 48, 59</sup>

**Summary and Clinical Applications.** The BSPS is a interviewer-rated scale and was the first to receive psychometric evaluation in both small and large samples. Its advantage includes its brevity and ease of administration and with the physiological symptom subscale. The scale has also been used cross-culturally.<sup>51</sup> It is also a widely used interviewer-rated scale. It has been adapted for computer-assisted interviewers, as has the LSAS.

## **Assessment Tools for Nongeneralized (Specific) Social Anxiety Disorder**

Fear of public speaking is the most prevalent and studied form of nongeneralized SAD.<sup>37, 49</sup> Three assessment scales of public speaking are described. Each scale is reviewed briefly because of limited space.

### *Personal Report of Confidence as a Speaker Questionnaire*

The original Person Report of Confidence as a Speaker Questionnaire scale<sup>19</sup> was developed to assess the degree of confidence as a speaker. The shortened, 30-item version was developed in true-false format. This version shows adequate internal consistency<sup>28</sup> and validity, but its test-retest reliability is unknown.

### *Personal Report of Communication Apprehension*

The Personal Report of Communication Apprehension<sup>36</sup> scale was developed to assess apprehension during public speaking, public meetings, and group discussions. This is a 24-item scale that is rated on a 5-point Likert scale. This format provides more information about the severity of the problem than does the true-false one. Examples include

"I dislike participating in group discussions," "I am afraid to express myself at the meetings," and "I feel relaxed while giving a speech." This scale has been used by the scale's authors. To the best of the current author's knowledge, no normative data are available, and little is known about its psychometric properties.

### *Self-Statements During Public Speaking Scale*

The Self-Statements During Public Speaking (SSPS)<sup>28</sup> scale was developed to assess fearful thoughts experienced during public speaking. The items in this scale are mainly derived from the SISST, but items that are consistent with the cognitive model of SAD have been added. It consists of two subscales, the Positive Self-Statements (SSPS-P) and the Negative Self-Statements (SSPS-N) subscales. Each subscale contains five items. Examples include "Maybe I can put him/her at ease by starting things going," "I am a loser," and "I expect the worst." Adequate internal consistency has been reported. Good convergent validity with FNE, SAAD, and SPAI and good divergent validity has been reported with BDI and the SPAI.

### **Tools to Assess Disability Because of Social Anxiety Disorder**

Three types of criteria should be considered to assess global improvement in SAD<sup>6</sup>: (1) Objective: symptoms and avoidance behavior; (2) Adaptive: level of functioning and expression of potential; and (3) Subjective: perception of well-being. The authors review below two scales designed to assess level of functioning due to SAD. The Sheehan Disability Scale and other scales also have been used in assessment of disability due to SAD, but these scales are not specific for SAD. No scale has been developed to assess quality of life in patients with the SAD.

### *Liebowitz Self-Rated Disability Scale*

The Liebowitz Self-Rated Disability Scale<sup>46</sup> is a recently designed scale to assess functional disability due to SAD. It consists of 11 items, with scores ranging from 0 to 4. It assesses current (past 2 weeks) and most severe lifetime impairment due to SAD. Domains include school, work, family, marriage/dating, friendship, other interests (e.g., hobbies and religious activities), activities of living, and suicidal behavior. It also includes items on alcohol, drug abuse, and mood regulation. Items may be totaled for current and lifetime disability assessments, or items may be reported separately for descriptive use. Examples include "pursuing hobbies and other interests (e.g., religion and sports)" and "having mostly comfortable interactions with the members of my family." Preliminary psychometric properties of the scale have been studied and reported in a small sample.<sup>45</sup>

### *The Disability Profile*

The Disability Profile<sup>46</sup> is a recently designed, interviewer-rated scale to assess functional disability due to SAD. It consists of eight items, the scores of which range from 0 to 4. It assesses current (past 2 weeks) and most severe lifetime impairment due to SAD. Domains include school, work, family, marriage/dating, friendship, other interests (e.g., hobbies and religious activities), activities of living, and suicidal behavior. Items may be totaled for current and lifetime disability assessments, or items may be reported separately for descriptive use. Preliminary psychometric properties of the scale have been studied and reported in a small sample.<sup>46</sup>

### **SUMMARY**

There are several old and new tools for assessment of generalized SAD but few for nongeneralized SAD. Scales are available in both self-rated and interviewer-rated formats. Self-rated scales vary in appearance in length and specificity for SAD and psychometric properties. The best-studied self-rated scales are the FQ, FNE, SAAD, SPAI, and SPIN. The FQ is an early scale, with a subscale of social phobia with reasonable psychometric properties and has withstood the test of time. The FNE and SAAD are based on cognitive models of SAD but lack assessment of physiologic arousal symptoms—an important symptom cluster of SAD. The SPIN is a relatively new scale and shows potential especially with its three-item screener for generalized SAD.

The two interviewer-rated scales, the LSAS and BSPS, are both widely used and demonstrate sound psychometric properties. Either one can be regarded as a satisfactory scale in the assessment of symptom severity and treatment response. The BSPS also measures several physical symptoms common in SAD.

There are fewer validated tools available for nongeneralized SAD. It is a prevalent condition that may account for 25% or more of patients with SAD.<sup>49</sup> More research is required on the epidemiology, recognition, assessment, and treatment of nongeneralized SAD. Education of patients and clinicians, and the use of improved and briefer tools in these settings, may help SAD patients to obtain appropriate help and improve their functioning and productivity. Few tools are available that can reliably assess disability due to SAD, and more research in this area is important and required.

### **References**

1. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, ed 3. Washington, DC, American Psychiatric Press, 1980
2. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, ed 4. Washington, DC, American Psychiatric Press, 1994

3. Beidel DC, Turner SM, Cooley MR: Assessing reliable and clinically significant change in social phobia: Validity of the Social Phobia and Anxiety Inventory. *Behav Res Ther* 31:331-337, 1993
4. Beidel DC, Borden JW, Turner SM, et al: The Social Phobia and Anxiety Inventory: concurrent validity with clinical sample. *Behav Res Ther* 27:573-576, 1989
5. Baldwin D, Bobes J, Stein DJ, et al: Paroxetine in social phobia, randomized, double blind, and placebo-controlled study. *Br J Psychiatry* 175:120-126, 1999
6. Bobes J: How is recovery from social anxiety disorder defined? *J Clin Psychiatry* 17(suppl):12-16 1998
7. Bobes J, Badia X, Luque A, et al: Validation of the Spanish version of the LSAS, SAD and Sheehan Disability Inventory for the evaluation of social phobia. *Med Clin (Barc)* 112:530-538, 1999
8. Brown EJ, Heimberg RG, Juster HR: Social phobia subtype and avoidant personality disorder: Effects on severity of social phobia, impairment, and outcome of cognitive-behavioral treatment. *Behav Ther* 26:467-487, 1995
9. Clark DB, Feske U, Macia CL, et al: Systemic assessment of social phobia in clinical practice. *Depress Anxiety* 6:47-61, 1997
10. Connor CM, Davidson JRT, Churchill E, et al: Psychometric properties of the Social Phobia Inventory. *Br J Psychiatry* 176:379-386, 2000
11. Connor KM, Kobak KA, Churchill LE, et al: The Mini-SPIN: A brief assessment for generalized social anxiety disorder. *Depress Anxiety*, in press
12. Cox BJ, Swinson RP: Assessment and measurement. *In* Stein MB (ed): *Social Phobia: Clinical and Research Perspectives*. Washington, DC, American Psychiatric Press, 1995, pp 261-291
13. Davidson JRT, Potts N, Richichi E, et al: Treatment of social phobia with clonazepam and placebo. *J Clin Psychopharmacol* 13:423-428, 1993
14. Davidson JRT, Potts NLS, Richichi EA, et al: The Brief Social Phobia Scale. *J Clin Psychiatry* 52:48-51, 1991
15. Davidson JRT, Miner CM, DeVeugh-Geiss J, et al: The Brief Social Phobia Scale: A psychometric evaluation. *Psychol Med* 27:161-166, 1997
16. Davidson JRT, Hughes DL, George LK, et al: The epidemiology of social phobia: Findings from the Duke Epidemiological Catchment Area Study. *Psychol Med* 23:709-718, 1993
17. Emmanuel NP, Mintzer OB, Morton A, et al: Bupropion-SR in the treatment of Social Phobia. *Depress Anxiety* 12:111-113, 2000
18. Glass CR, Merluzzi T, Biever J, et al: Cognitive assessment of social anxiety: Development and validation of a self-statement questionnaire. *Cogn Ther Res* 6:37-55, 1982
19. Gilkinson H: Social fears as reported by students in college speech classes. *Speech Monogr* 9:141-160, 1942
20. Geer JH: The development of a scale to measure fear. *Behav Res Ther* 3:45-53, 1965
21. Gelernter CS, Uhde TW, Cimboric P, et al: Cognitive-behavioral and pharmacological treatment of social phobia: A controlled study. *Arch Gen Psychiatry* 48:938-945, 1991
22. Heimberg RG, Hope DA, et al: DSM-III-R subtypes of social phobia: Comparison of generalized social phobics and public speaking phobics. *J Nerv Ment Dis* 178:172-179, 1990
23. Heimberg RG, Mueller GP, Holt CS, et al: Assessment of anxiety in social interaction and being observed by others: The Social Interaction and Anxiety Scale and the Social Phobia Scale. *Behav Ther* 23:53-57, 1992
24. Heimberg RG: Social Avoidance and Distress Scale and Fear of Negative Evaluation Scale. *In* Hersen M, Bellack AS (eds): *Dictionary of Behavioral Assessment Techniques*. New York, Pergamon Press, 1988, pp 425-427
25. Heimberg RG, Horner KJ, Juster HR, et al: Psychometric properties of Liebowitz Social Phobia Scale. *Psychol Med* 29:199-212, 1999
26. Heimberg RG, Liebowitz MR, Hope DA, et al: Cognitive-behavioral group therapy vs Phenelzine therapy for social phobia: 12-week outcome. *Arch Gen Psychiatry* 55:1133-1141, 1998
27. Herbert JD, Bellack AS, Hope DA: Concurrent validity of the Social Phobia and Anxiety Inventory. *J Psychopathol Behav Assess* 13:357-368, 1991

28. Hoffman SG, DiBartolo PM: An instrument to assess self-statements during public speaking: Scale development and preliminary psychometric properties. *Behav Ther* 31:499-515, 2000
29. Horner KJ, Juster HR, Brown EJ, et al: Psychometric properties of the Liebowitz Social Anxiety Scale [poster]. Presented at the 16th Annual Meeting of the Anxiety Disorders Association of America. Orlando, 1996
30. Leary MR: A brief version of the Fear of Negative Evaluation Scale. *Personality Soc Psychol Bull* 9:371-375, 1983
31. Liebowitz MR: Update on the diagnosis and treatment of social anxiety disorder. *J Clin Psychiatry* 18(suppl):22-26, 1999
32. Liebowitz MR: Social phobia. In Klein DF (ed): *Anxiety*. Basel, Karger, 1987, pp 141-173
33. Liebowitz MR, Schneier FR, Campeas R, et al: Phenelzine vs atenolol in social phobia: A placebo controlled comparison. *Arch Gen Psychiatry* 49:290-300, 1992
34. Mancini C, Van Ameringen MA: Paroxetine in social phobia. *J Clin Psychiatry* 57:519-522, 1996
35. Mattick RP, Peters L, Clark JC: Exposure and cognitive restructuring for social phobia: A controlled study. *Behav Ther* 20:3-23, 1989
36. McCroskey JC: Validity of the PRCA as an index of oral communication apprehension. *Communication Monogr* 45:192-203, 1978
37. Mannuzza S, Schneier FR, Chapman TF, et al: Generalized social phobia: Reliability and validity. *Arch Gen Psychiatry* 52:230-237, 1995
38. Marks IM, Mathews AM: Brief standard self-rating for phobic patients. *Behav Res Ther* 17:263-267, 1979
39. Mizes JS, Crawford J: Normative values on the Marks and Mathews Fear Questionnaire: A comparison as a function of age and sex. *J Psychopathol Behav Assess* 8:253-262, 1986
40. Oei TPS, Moylan A, Evans L, et al: Validity and clinical utility of the Fear Questionnaire for anxiety-disorder patients. *J Consult Clin Psychol* 3:391-397, 1991
41. Olfson M, Guardino M, Struening E, et al: Barriers to the treatment of social anxiety. *Am J Psychiatry* 157:521-527, 2000
42. Osman A, Barrios FX, Aukes A, et al: Psychometric evaluation of the Social Phobia and Anxiety Inventory in college students. *J Clin Psychol* 51:235-243, 1995
43. Pande AC, Davidson JRT, Jefferson JW, et al: Treatment of social phobia with gabapentin: A placebo controlled study. *J Clinical Psychopharmacol* 19:341-348, 1999
44. Rodenbaugh TL, Chambless DL, Terrill DR, et al: Convergent, discriminant, and criterion related validity of the Social Phobia and Anxiety Inventory. *Depress Anxiety* 11:10-14, 2000
45. Schneier FR, Goetz D, Campeas R, et al: Placebo-controlled trial of moclobemide in social phobia. *Br J Psychiatry* 172:70-77, 1998
46. Schneier FR, Heckleman L, Garfinkel R, et al: Functional impairment in social phobia. *J Clin Psychiatry* 55:322-331, 1994
47. Schneier FR, Johnson J, Horning CD, et al: Social phobia: Comorbidity and morbidity in an epidemiological sample. *Arch Gen Psychiatry* 49:282-291, 1992
48. Stein MB, Fyer AJ, Davidson JRT, et al: Fluvoxamine treatment of social phobia: A double blind, placebo controlled study of social phobia. *Am J Psychiatry* 156:756-760, 1999
49. Stein MB, Kean MY: Disability and quality of life in social phobia: Epidemiological findings. *Am J Psychiatry* 157:1606-1613, 2001
50. Stein MB, Liebowitz MR, Lydiard RB, et al: Paroxetine treatment of generalized social phobia: A randomized controlled trial. *JAMA* 280:713, 1998
51. Tada K, Kojima T: Social phobia with somatic symptoms including nausea and urgency of micturition. *Seishin Shinkeigaku Zasshi* 102:355-366, 2000
52. Turner SM, McCanna M, Beidel DC: Validity of the social avoidance and distress and fear of negative evaluation scales. *Behav Res Ther* 25:113-115, 1987
53. Turner SM, Beidel DC, Dancu CV, et al: An empirically derived inventory to measure social fears and anxiety: The social phobia and Anxiety Inventory. *Psychol Assessment* 1:35-40, 1989

54. Turner SM, Stanelly MA, Beidel DC, et al: The Social Phobia and Anxiety Inventory: Construct validity. *J Psychopathol Behav Assess* 11:221–233, 1989
55. Turner SM, Beidel DC, Dancu CV, et al: *Social Phobia and Anxiety Inventory Manual*. North Tonawanda, NY, Multihealth Systems, 1995
56. Uhde TW, Tancer ME, Black B, et al: Phenomenology and neurobiology of social phobia: Comparison with panic disorder. *J Clin Psychiatry* 52(suppl):11, 1991
57. Van Ameringen MA, Lane RM, Walker JR, et al: Sertraline treatment of generalized social phobia: A 20-week, double blind, placebo-controlled study. *Am J Psychiatry* 158:275–281, 2001
58. Van Ameringen MA, Mancini C, Streiner D: Fluoxetine efficacy in social phobia. *J Clin Psychiatry* 54:27–32, 1993
59. Van Ameringen MA, Mancini C, Oakman JM, et al: Nefazodone in social phobia. *J Clin Psychiatry* 60:96–100, 1999
60. Van Vilet LM, Den Boer JA, Westenberg HG: Psychopharmacological treatment of social phobia: A double blind placebo controlled study with fluvoxamine. *Psychopharmacology* 115:128–131, 1994
61. Versiani M, Nardi AE, Mundim FD, et al: Pharmacotherapy of social phobia: A placebo controlled study with moclobemide and phenelzine. *Br J Psychiatry* 161:353–360, 1992
62. Watson D, Friend R: Measurement of social evaluative anxiety. *J Consult Clin Psychol* 33:448–457, 1969
63. Wolpe J, Lang PJ: A Fear Survey Schedule for use in behavior therapy. *Behav Res Ther* 2:27–30, 1964

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