

Symptom Clusters in the Social Phobia subscale of the Social Phobia and Anxiety Inventory

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Introduction

- Social Anxiety Disorder (SAD), a debilitating anxiety disorder characterized by intense fear of negative evaluation by others in interpersonal and social performance situations and associated avoidance of these situations, is the most prevalent anxiety disorder in the U.S. (Kessler et al., 1994). SAD is a chronic and debilitating anxiety disorder, associated with high comorbidity, significant functional impairment, and significant economic costs (Herbert & Dalrymple, in press; Reich et al., 1994). Originally termed the “neglected anxiety disorder” (Liebowitz, Gorman, Fyer, & Klein, 1985) due to the paucity of research devoted to it, SAD has received considerable attention by researchers and scholars alike over the past two decades.
- As a result of this increased recognition, numerous measures have been developed to aid in clinical screening for SAD. The Social Phobia and Anxiety Inventory (SPAI) is “an empirically derived instrument incorporating responses from the cognitive, somatic, and behavioral dimensions of social fear” (Turner et al., 1989). The SPAI has good test-retest reliability, internal consistency, and discriminant, concurrent, and external validity (Beidel, Bordon, et al., 1989; Beidel, Turner, et al., 1989; Herbert et al., 1991; Turner et al., 1989). The measure elicits information regarding the severity of anxiety symptoms and provides two subscale scores: Social Phobia (SP) and Agoraphobia (AG), as well as a total score obtained by subtracting the latter from the former. However, Herbert and colleagues (1991) argued that the SP subscale is the best index of SAD symptoms.
- The SPAI’s factor structure and internal consistency are well-validated in an adult population, including support for the two-factor structure (Herbert et al., 1992; Osman et al., 1996; Osman et al., 1995). However, factors within the SP subscale have not been examined. Various distinctions have been proposed for symptoms within SAD, including cognitive specificity (Breitholtz et al., 1999; Bruch et al., 1993), social interaction (Eng et al., 2000), and performance (Liebowitz et al., 1985). These have been used in clinical assessment to refine treatment conceptualization and planning, though their clinical utility is inconsistent. Further distinctions could provide guidance for clinicians in adapting interventions to individual patients. The current study investigated the factor structure of the SPAI’s SP subscale in an effort to improve treatment adaptation and to examine empirically proposed symptom distinctions.

Method

- The present study examined symptomatology among an outpatient sample of adults seeking treatment for SAD. One hundred and ninety-nine participants (99 male, 100 female) were recruited via community advertisements, internet sources, and professional referrals for a free, 12-week treatment program. The participants’ ages ranged from 18 to 59, with a mean age of 32.84 (SD = 10.71). Thirty-two participants were full-time students, 34 were unemployed, 130 were gainfully employed, and one was retired. Participants’ self-identified race was as follows: 3.5% Asian American, 18.4% Black/African American, 3.5% Hispanic/Latino, 69.2% White/Caucasian, and 5.4% “other.” Their education level ranged from some high school (1.5%) to graduate or professional school (19.9%) with a mean education level of “some college.” All participants completed the SPAI at pretreatment, posttreatment, and follow-up assessments; only the pretreatment data are analyzed here.

Results

- Unrestricted and restricted principal components analyses were performed to identify symptom clusters within the SP subscale. Initially, the 32-item SP subscale was examined using an unrestricted principal-components analysis with a Varimax (i.e., orthogonal) rotation. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO = .914) was high. Bartlett’s Test of Sphericity was significant. Although a seven-factor solution (eigenvalue greater than 1.0) that accounted for 71.2% of the sample variance was produced initially, only four factors were retained based on scree plot results; there was a noticeable change in slope following the fourth factor, and less than three items loaded significantly onto the three remaining factors.
- A principle components analysis using a Varimax rotation then was conducted restricting the analysis to a four-factor solution. Thirty-one of 32 items were retained according to a .40 factor loading cut-off. The four factors accounted for 60.4% of the subscale’s variance. These items clustered into meaningful factors with loadings greater than .40: “Avoidant Behavior” (Factor 1), “Assertiveness/Self-disclosure” (Factor 2), “Physiological Reactivity” (Factor 3), and “Center of attention/Public Speaking” (Factor 4).
- Reliability analyses were conducted using Cronbach’s alpha and item-subscale total correlations to explore the internal consistency of the SP subscale and the four factors within the SP subscale. Results suggest very good internal reliability. Cronbach’s alpha for the SP subscale was .95 and inter-item correlations ranged from .09 to .78. For Factor 1, Cronbach’s alpha was .93 and inter-item correlations ranged from .27 to .79. For Factor 2, Cronbach’s alpha was .90 and inter-item correlations ranged from .28 to .78. The Cronbach’s alpha for Factor 3 was .77 and inter-item correlations ranged from .33 to .92. Lastly, Factor 4’s Cronbach’s alpha was .772 and inter-item correlations ranged from .21 to .52.

Discussion

- The results support a four-factor solution to the SPAI Social Phobia subscale, which are linked to symptoms typically associated with SAD and their corresponding treatment interventions. Since avoidance behavior and severity varies among socially anxious individuals (Stein et al., 2000), Factor 1’s measurement of avoidant behavior may be useful in developing behavioral modification through role-played and in vivo exposure. Factor 2 (“Assertiveness/Self-Disclosure”) may assist clinicians in determining if assertiveness or verbal social skills training is warranted. For many socially anxious individuals, their ability to function is impacted negatively by social skills deficits (Baker et al., 2000) and social skills training has been shown to improve traditional cognitive behavior therapy (Herbert et al., 2005). Factor 3 (“Physiological Reactivity”) may prove clinically useful in differentiating the panic-like physical response to anxiety from anxious thoughts associated with social phobia, and suggests interventions such as relaxation or mindfulness meditation training. Lastly, Factor 4, “Center of Attention/Public Speaking,” may prove useful in assessing the degree to which individuals fear and avoid this most common phobic situation. Factor 4’s recognition of situations that trigger anxious responses may assist treatment adaptation by steering the clinical implementation of techniques suggested by Factor 3 to specific contexts.
- To date, there has been relatively little research examining subtypes of SAD based on symptom distinctions, particularly related to predictors of treatment response. Using the SP subscale to identify symptom clusters may prove useful in tailoring treatment to individual patients. By identifying symptom clusters, clinicians might be able to identify, a priori, subtypes of patients who can be treated with different intervention components of CBT (e.g., exposure, social skills training, assertiveness training) to maximize treatment response.

