

Knowledge of Social Anxiety Disorder Relative to Attention Deficit Hyperactivity Disorder Among Educational Professionals

James D. Herbert, Kia Crittenden, and Kristy L. Dalrymple

Department of Psychology, Drexel University

Social anxiety disorder (SAD), the 3rd most common psychiatric disorder in the United States, follows a chronic and unremitting course, often resulting in severe impairments in multiple areas of functioning. Despite a typical age of onset in early adolescence, the disorder is rarely recognized and treated in adolescent populations. Given its early age of onset, school professionals are arguably in the best position to detect symptoms of SAD and to provide appropriate referrals for assessment and intervention. This study examined the knowledge that teachers, school counselors, and school psychologists have of SAD in relation to their knowledge of a prototypical externalizing disorder, attention deficit hyperactivity disorder (ADHD). The results suggest that all 3 groups of educational professionals are surprisingly unfamiliar with adolescent SAD.

Social anxiety disorder (SAD), also known as social phobia, is characterized by a pervasive fear and avoidance of social situations in which one may encounter perceived negative evaluation or embarrassment (Herbert & Dalrymple, in press). The third most common psychiatric disorder in the United States, SAD has a lifetime prevalence of 13.3% according to the U.S. National Comorbidity Survey (Kessler et al., 1994). Only limited data are available regarding the prevalence of SAD in child and adolescent samples, although the disorder appears to be quite common in this population. Shaffer et al. (1996) reported current prevalence of 15.1% for SAD in a sample of 1,285 children ages 9 to 17. Wittchen, Stein, and Kessler (1999) reported prevalence of 4.0% in a sample of 14- to 17-year-old German adolescents. Furthermore, Heimberg, Stein, Hiripi, and Kessler (2000) reported evidence that the lifetime prevalence of the generalized type of SAD appears to have increased in recent cohorts.

SAD is frequently comorbid with other disorders, including depression (Beidel, 1998) and substance abuse (Burke & Stephens, 1999). Even when the comorbid condition is recognized and treated, SAD often remains undetected (Brady & Kendall, 1992). The onset of SAD typically occurs in early adolescence (Black, 1992; Kashdan & Herbert, 2001; Velting & Albano, 2001), yet it frequently goes unrecognized and therefore untreated. SAD often has detrimental effects on the development of peer relationships and social

skills (Hartup, 1996; La Greca & Lopez, 1998; Strauss, Frame, & Forehand, 1987; Strauss, Lahey, Frick, Frame, & Hynd, 1988). Spence, Donovan, and Brechman-Toussaint (1999) found that the disorder was related to low levels of social support. Ginsburg, La Greca, and Silverman (1998) found that socially anxious children exhibited poor social skills, low self-esteem, poor assertiveness, negative peer interactions, low social acceptance, and impairments in social functioning.

SAD is also associated with impairments in academic achievement (Craske, 1999). Many children and adolescents with the disorder fear common situations at school such as oral presentations, speaking up in classroom discussions, and interactions with teachers and peers. This fear may lead to avoidance of school-related activities and eventually to absenteeism (Beidel, Turner, & Morris, 1999). Among a sample of school-refusal children, Last and Strauss (1990) found that social anxiety was the second most common anxiety disorder.

Despite the importance of understanding disorders such as SAD, several lines of evidence point to an alarming lack of knowledge among professionals regarding adolescent mental health issues. Blum and Bearinger (1990) examined knowledge and attitudes concerning various domains of professional training and perceived competence in adolescent health care in a sample of more than 3,000 health care professionals. Across disciplines, professionals reported that they received insufficient training in working with adolescent psychopathology. Furthermore, both physicians and psychologists reported a lack of interest in continuing education and acquiring skills needed to better address adolescent concerns at rates of 73% and 60%, respectively.

This research was supported in part by Grant R01 MH052232 from the National Institute of Mental Health.

Requests for reprints should be sent to James D. Herbert, Department of Psychology, Drexel University, Mail Stop 988, 245 N. 15th Street, Philadelphia, PA 19102-1192. E-mail: james.herbert@drexel.edu

There is growing evidence that SAD is especially underrecognized among health care professionals. Zamorski and Ward (2000) commented on the lack of knowledge of the disorder in general medical practice settings. Liebowitz, Gorman, Fyer, and Klein (1985) termed SAD the "neglected anxiety disorder." Den Boer and Dunner (1999) assessed the knowledge and perceptions of European and North American psychiatrists and primary care physicians regarding SAD. Interviews were conducted to measure knowledge and awareness of the disorder. The physicians were then asked to maintain a diary outlining demographic, diagnostic, and symptom data of their next 20 patients presenting with any psychological disorder. The researchers subsequently assessed the same patients and found that 25% of the patients met diagnostic criteria for SAD yet went undiagnosed by the psychiatrists and primary care physicians. In addition, approximately one half of the primary care physicians, both in Europe and North America, were unaware of the term *social anxiety disorder*.

The underdiagnosis of SAD and subsequent lack of treatment result in progressively poorer prognosis with time (Kashdan & Herbert, 2001). As the disorder remains untreated, the potential for developing a comorbid disorder increases (Essau, Conradt, & Petermann, 1999). Early detection and intervention during adolescence, the typical period of onset, are therefore essential to arresting the chronic trajectory of the disorder. In addition, there is growing evidence that childhood shyness precedes the onset of SAD as a clinical disorder (e.g., Hayward, Killen, Kraemer, & Taylor, 1998; Turner, Beidel, & Townsley, 1990), suggesting the potential importance of early recognition of children at risk for the disorder.

School personnel, including teachers, school counselors, and school psychologists, are arguably the professionals who are in the best position to provide this early recognition, given how frequently they interact with adolescents. In a treatment study of adolescent SAD conducted over the past several years, we have had the opportunity to work closely with educational professionals in our participant recruitment efforts and have been surprised by their relative unfamiliarity with the disorder. Thus, the aims of this study were (a) to evaluate the knowledge of teachers, school counselors, and school psychologists in the domains of diagnosis, symptomatology, treatment, and general information about SAD; (b) to compare the level of knowledge of a prototypical externalizing behavioral disorder with the knowledge of SAD; and (c) to assess the relation between participants' confidence in their ability to recognize SAD and their knowledge of the disorder. Attention deficit hyperactivity disorder (ADHD) served as the comparison disorder as it represents a prototypical externalizing disorder and because we hypothesized that school personnel may attend more to externalizing

behaviors due to the fact that such behaviors are disruptive in classroom settings.

Method

Fifty-one school personnel employed by 19 different public, private, parochial, and charter middle and high schools within the Philadelphia metropolitan area volunteered to participate in the study. The sample (15 men and 36 women) consisted of 28 certified teachers, 17 certified school counselors, and 6 licensed school psychologists. Thirty-nine percent of the sample held a bachelor's degree, 59% held a master's degree, and 2% held a doctorate. Seventy-two percent of the participants were employed in public schools. Parochial, charter, and private school employees accounted for 12%, 10%, and 6% of the sample, respectively. The average number of years of experience within their respective fields was 15.65 ($SD = 11.32$). All of the participants routinely worked with adolescents ranging in age from 9 to 18 years. We often provide lectures on anxiety disorders to educational institutions in the Philadelphia area as part of ongoing outreach programs. Volunteers were excluded if their educational institution had participated in this program.

We developed the Knowledge of Social Anxiety Disorder Scale (KSADS) to assess knowledge of SAD. The KSADS was designed using the Knowledge of Attention Deficit Disorders Scale (KADDS), developed by Scituito, Terjesen, and Bender-Frank (2000), as a model. The KADDS, a 36-item rating scale, assesses knowledge of ADHD in one of three domains. Items target general information about the disorder ($n = 15$), issues concerning symptoms and diagnosis ($n = 9$), and the treatment of ADHD ($n = 12$); each of these domains represents a distinct subscale. Presented in a true, false, or don't know format, this instrument allows for differentiation of respondent misperceptions from what respondents admit that they simply do not know. The sum of correct responses constitutes the score for each subscale; the total score is calculated by summing the three subscales. Possible subscale scores therefore range from 0 to the total number of subscale items (15, 9, and 12, respectively), and 0 to 36 for the full scale. Scituito et al. (2000) determined the content validity of the KADDS item groupings by means of expert consensus and reported an internal consistency coefficient alpha of .81.

Like the KADDS, the KSADS is a 36-item rating scale measuring knowledge in the domains of general information, symptom and diagnosis, and treatment of SAD (see Table 1). Items on the KSADS were designed to parallel as closely as possible corresponding items on the KADDS, while simultaneously covering the major content areas related to SAD. Original items were constructed when the corresponding KADDS item had no relevance to the topic of SAD. Original

Table 1. *KSADS Items, Correct Responses, and Percentage of Participants who Answered Correctly*

KSADS Item	Correct Response	% Correct
1. Most estimates suggest that SAD occurs in approximately 2% of school-age children.	False	9.8
2. Current research suggests that SAD is largely the result of ineffective parenting skills.	False	43.1
3. SAD children fear possible scrutiny by others.	True	78.4
4. Children with SAD often have difficulty with peer relationships.	True	9.8
5. In order to be diagnosed with SAD, the child's symptoms must have been present for at least 6 months	True	39.2
6. SAD is more common in the first-degree biological relatives (i.e., mother, father) of children with SAD than in the general population.	True	18.0
7. One symptom of SAD children is that they have been physically cruel to other people.	False	47.1
8. Selective serotonin reuptake inhibitors have been effective in reducing symptoms for many children with SAD.	True	20.0
9. SAD children often cry or tantrum in situations with unfamiliar people.	True	39.2
10. Cognitive behavioral interventions are generally effective for treating childhood SAD.	True	41.2
11. It is common for SAD children to have an inflated sense of self-esteem or grandiosity.	False	43.1
12. When cognitive-behavioral treatment for childhood SAD is terminated, symptoms typically return to baseline levels.	False	17.6
13. It is possible for an adult to be diagnosed with SAD.	True	74.5
14. SAD children often have little desire to engage in social situations.	False	23.5
15. Side effects of some of the most common medications used to treat SAD include nausea and insomnia.	True	25.5
16. Current wisdom about SAD suggests two subtypes: a discrete subtype and a generalized subtype.	True	15.7
17. Symptoms of depression are found more frequently in SAD children than in non-SAD children.	True	51.0
18. Individual psychotherapy is not usually sufficient for the treatment of most SAD children.	False	17.6
19. Most SAD children "outgrow" their symptoms by the onset of puberty and subsequently function normally in adulthood.	False	37.3
20. In severe cases of SAD, medication is often used before other behavior modification techniques are attempted.	True	41.2
21. In order to be diagnosed with SAD, a child must exhibit relevant symptoms with peers, not just adults.	True	47.1
22. If a child with SAD is able to engage in conversation with unfamiliar adults, that child should also be able to engage in conversation with unfamiliar peers.	False	54.9
23. Reducing dietary intake of sugar or food additives is generally effective in reducing the symptoms of SAD.	False	29.4
24. A diagnosis of SAD by itself makes a child eligible for placement in special education.	False	47.1
25. Antidepressant drugs are the most common type of drug used to treat children with SAD.	True	29.4
26. SAD children often avoid social situations involving interactions with peers.	True	68.6
27. SAD children generally experience more problems in familiar situations than in novel situations.	False	41.2
28. There are specific physical symptoms that can be identified by medical doctors (e.g., pediatricians) in making a definitive diagnosis of SAD.	False	21.6
29. In school-age children the prevalence of SAD in males and females appears to be approximately equal.	False	19.6
30. In very young children (less than 4 years old), the problem behaviors (anxiety in certain social situations) of SAD children are distinctly different from age-appropriate behaviors of non-SAD children.	False	15.7
31. Children with SAD may often be distinguishable from normal children in both classroom and leisure situations.	True	39.2
32. The majority of SAD children evidence some degree of poor school performance in elementary school years.	False	37.3
33. Symptoms of SAD may often be seen in non-SAD children who come from inadequate and chaotic home environments.	True	33.3
34. Behavioral/psychological interventions for children with SAD focus more on decreasing the child's anxiety than on decreasing the child's avoidance behavior.	False	11.8
35. Electroconvulsive therapy (i.e., shock treatment) has been found to be an effective treatment for severe cases of SAD.	False	23.5
36. Treatments for SAD that focus primarily on punishment have been found to be the most effective in reducing symptoms of SAD.	False	54.9

Note: KSADS = Knowledge of Social Anxiety Disorder Scale.

items nevertheless assess knowledge in the same domains as the corresponding item on the KADDS. Each item was worded so that there was an unambiguously correct answer based on the extant empirical literature; specific citations justifying each answer are provided in an appendix to the KSADS. An example of a KSADS item corresponding directly to a KADDS item

is "Current research suggests that SAD is largely the result of ineffective parenting skills." An example of an original KSADS item is "SAD children often avoid social situations involving interactions with peers." The number of items per subscale, range of possible scores, and scoring procedure of the KSADS is identical to that of the KADDS described previously.

Participants provided their age, sex, professional position, and educational status on a demographics form. Participants also identified the type of school and grade level in which they worked as well as their years of experience. Participants rated their confidence in their ability to recognize each disorder on a Likert scale ranging from 1 (*not confident*) to 7 (*very confident*).

Participants received packets containing a consent form, demographics form, KSADS, KADDS, and an addressed stamped envelope in their school mailboxes. The order of presentation of the KSADS and KADDS was varied randomly. A cover letter explaining the purpose of the study instructed participants to complete the questionnaires without the use of outside resources or consultation with colleagues. The letter also informed participants that those who participated would be entered in a lottery to win \$50. Information about the study and questionnaire packets were distributed to 200 school professionals, yielding a 25.5% participation rate. On receipt of completed questionnaire packets, the researchers mailed all volunteers a copy of the correct answers to both questionnaires.

Results and Discussion

The percentage of participants responding correctly to each item of the KSADS is presented in Table 1. The sample as a whole endorsed several myths and misconceptions about SAD and displayed an overall lack of knowledge of some aspects of the phenomenology of the disorder. For example, only slightly more than one third of the sample knew that most children do not outgrow SAD by the onset of puberty. Seventy-one percent of the sample did not know that there is no evidence that lowering dietary sugar and food additives significantly reduces SAD symptoms. Eighty-four percent of participants did not know that there exist two primary subtypes of SAD. Although most of the sample (78%) correctly answered “true” to the item “SAD

children fear possible scrutiny by others,” 31% did not know that children with SAD often avoid social situations involving interactions with peers. Only a minority of participants knew that cognitive-behavioral interventions are generally effective for SAD (41%) or that depressive symptoms are often comorbid with SAD (51%).

Descriptive statistics for the total scores and the three subscale scores of both the KSADS and the KADDS, broken down by the participants’ discipline, are presented in Table 2. Data were analyzed by means of a series of 2 (instrument) × 3 (discipline) mixed factorial analyses of variance (ANOVAs), with repeated measures on the first factor. Significant effects were followed up where appropriate with Tukey’s post hoc tests to clarify differences between conditions. These analyses examined the relation between KSADS and KADDS scores and discipline (teaching, school counseling, and school psychology). An ANOVA conducted to assess effects on overall knowledge (i.e., total questionnaire scores) revealed significant main effects for both the Discipline and Instrument factors, $F(2, 48) = 9.81, p < .001$, and $F(1, 48) = 55.2, p < .001$, respectively. The interaction term did not approach significance. The sample obtained significantly lower mean total scores on the KSADS relative to the KADDS, indicating less knowledge of SAD relative to ADHD. Post hoc tests revealed that on both the KSADS and KADDS, the mean scores of each group differed significantly from each other. As illustrated in Table 2, counselors scored significantly poorer than did school psychologists, followed by teachers, who scored the worst.

Three additional ANOVAs evaluated the impact of the Instrument and Discipline factors on each of the three subscales of the questionnaires. The ANOVA on the treatment domain subscale revealed significant main effects for both instrument and discipline, $F(1, 48) = 75.63, p < .001$, and $F(2, 48) = 8.16, p < .001$, respectively; the interaction was not significant. Partici-

Table 2. Mean Subscale Scores, Total Scores, and Confidence Ratings

	Treatment		Symptom/ Diagnosis		General Information		Total Score		Confidence Rating	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
KSADS										
Teachers	2.70	2.92	3.12	2.52	4.41	3.64	9.96	8.34	3.74	2.75
School Counselors	4.00	2.81	4.35	2.29	5.47	3.18	13.82	7.15	5.53	1.97
School Psychologists	5.57	1.27	6.57	1.13	8.14	2.61	20.29	3.15	4.86	1.68
Total Sample	3.53	2.86	4.02	2.55	5.27	3.54	12.67	8.14	4.49	2.49
KADDS										
Teachers	5.63	3.1	5.04	2.28	6.37	3.5	17.04	8.35	6.3	2.67
School Counselors	8.71	1.96	6.88	1.58	7.35	1.93	22.94	3.78	7.35	1.46
School Psychologists	9.86	1.46	7.86	1.68	11.57	2.76	29.29	5.15	7.57	1.27
Total Sample	7.23	3.10	6.06	2.22	7.39	3.42	20.69	7.95	6.82	2.21

Note: KADDS = Knowledge of Attention Deficit Disorders Scale; KSADS = Knowledge of Social Anxiety Disorder Scale. (Copies of the KSADS are available upon request from the first author.)

pants demonstrated less knowledge of treatment-related issues for SAD relative to ADHD. Post hoc tests revealed that within the treatment domain, the teachers scored lower than both the school psychologists and the school counselors; these latter two groups did not differ significantly. The ANOVA on the symptom and diagnosis domain also produced significant main effects, $F(1, 48) = 25.55, p < .001$, and $F(2, 48) = 9.5, p < .001$ for instrument and discipline, respectively. The interaction was not significant. As with the treatment domain, the participants demonstrated less knowledge of symptoms and diagnostic issues for SAD relative to ADHD. Post hoc tests revealed that teachers, school counselors, and school psychologists each differed significantly from one another, with the teachers scoring lowest and psychologists scoring highest. Finally, there was a significant main effect of instrument on the General Information subscale, $F(1, 48) = 26.43, p < .001$. Again, the KADDS subscale scores were significantly higher than corresponding scores on the KSADS, suggesting lower overall knowledge with respect to general information pertaining to SAD relative to ADHD. The main effect for discipline also reached significance, $F(2, 48) = 7.28, p < .001$; the Interaction effect was not significant. Post hoc tests showed that school psychologists obtained significantly higher scores in the general information domains compared to both school counselors and teachers, who did not differ significantly.

An additional ANOVA analyzed the effects of instrument and discipline on confidence ratings (see Table 2). A main effect was found for instrument $F(1, 48) = 40.43, p < .001$. The participants reported their mean confidence rating in the ability to recognize SAD significantly lower than the reported mean confidence rating in the ability to recognize ADHD. The discipline effect also reached significance, $F(2, 48) = 3.33, p < .05$; the Instrument and Discipline factors did not interact significantly. Post hoc tests revealed significant differences in the confidence ratings between teachers and counselors, with counselors reporting higher confidence; however, neither group differed significantly from psychologists.

To examine the relation between participants' actual knowledge of SAD and ADHD and their confidence in that knowledge, Pearson correlations were conducted on confidence ratings and mean total scores on the KSADS and KADDS. For the sample as a whole, SAD confidence ratings correlated significantly with KSADS total scores ($r = .49, p < .01$), and ADHD confidence ratings likewise correlated with KADDS total scores ($r = .70, p < .01$). A Fisher's z test revealed that these correlation coefficients differed significantly ($z = 1.70, p < .05$). The mean confidence ratings reported specifically by teachers significantly correlated with both the KSADS and KADDS ($r = .49, p < .01$, and $r = .73, p < .01$, respectively); the difference between these

correlations was not statistically significant (Fisher's $z = 1.49, ns$). The school counselors had a significant correlation between their confidence ratings and the KADDS ($r = .63, p < .01$), but their confidence rating did not correlate significantly to the KSADS. Once again, the difference in the magnitude of the correlation coefficients did not reach significance (Fisher's $z = .85, ns$). Neither instrument significantly correlated with the corresponding confidence ratings reported by school psychologists.

Compared to adult SAD, there has been a relative paucity of research on the phenomenology and treatment of the disorder in adolescent populations (Kashdan & Herbert, 2001). Various sources of data suggest that SAD is frequently overlooked by health care and educational professionals, even while other less common disorders are recognized. We hypothesized that this lack of awareness of SAD reflects a relative lack of knowledge about the disorder. Consistent with predictions, educational professionals demonstrated significantly lower knowledge of SAD relative to ADHD, despite the fact that SAD appears to be more common than ADHD. For example, Shaffer et al. (1996) found a point prevalence of 15.1% for SAD, relative to 6.5% for ADHD.

There are several possible explanations for these findings. First, as a prototypical externalizing disorder, ADHD is frequently associated with disruptive classroom behavior. Children and adolescents with SAD, in contrast, tend to go out of their way to avoid drawing attention to themselves, so are typically not disruptive (Kashdan & Herbert, 2001). Weisz, Suwanlert, Chaityasit, and Walter (1987) proposed that the distress experienced by adults, rather than that experienced by children directly, serves as the principal determinant of intervention for childhood psychopathology. Because ADHD is generally more distressing to school personnel than SAD, the disorder may be recognized and referred for intervention more frequently, leading in turn to greater knowledge. This is consistent with the observation of Lewinsohn, Rohde, and Seeley (1998) that adults often fail to recognize depression—a characteristic internalizing disorder—among adolescents. Second, SAD may often be mistaken as subclinical shyness and therefore dismissed as a personality trait lacking clinical significance (Beidel, 1998). Third, given that the Food and Drug Administration has approved several medications for ADHD, pharmaceutical companies have sponsored a variety of educational and marketing efforts. When the Food and Drug Administration approved paroxetine for adult SAD in 1999, GlaxoSmithKline launched major advertising and educational campaigns regarding SAD. As no medications have yet been approved for adolescent SAD, no such educational efforts have taken place.

Prior to completing the two questionnaires, participants were asked to rate their confidence in their ability

to recognize SAD and ADHD. Interestingly, only a modest correlation emerged between these confidence ratings with respect to SAD and actual scores on the KSADS, suggesting that participants' certainty with respect to their ability to recognize the disorder does not correspond well to their actual knowledge of the disorder. For the participants as a group, the association between confidence and actual knowledge was higher for ADHD than for SAD. In addition, although school counselors did not differ significantly from school psychologists in their confidence ratings (and in fact demonstrated a nonsignificant trend toward *higher* confidence), they nevertheless scored lower on the KSADS compared to the psychologists.

Although many participants demonstrated significant deficits in their knowledge of SAD, this does not, of course, suggest that they would be unwilling to learn more about the disorder. Some participants wrote short notes on their questionnaires apologizing for their perceived poor performance. Although participants were not specifically questioned about their interest in gaining additional knowledge about SAD, such a desire was expressed through several notes accompanying questionnaire packets requesting additional reading materials about the disorder.

There are several limitations of this study that should be acknowledged. The KSADS is a new and untested measure, and its psychometric properties are unknown. Our confidence in the KSADS is bolstered somewhat by the fact that the items were designed with attention to both face and content validity, and our results were consistent with our a priori predictions. Nevertheless, further research is needed to assess the degree to which the KSADS taps fully the various domains of knowledge with respect to SAD. In addition, although efforts were made to recruit a diverse sample of educational professionals, given the relatively modest number of participants from each specific discipline in this study, the generalization of the findings with respect to disciplinary differences in particular should be approached with caution.

With these limitations in mind, our results nevertheless suggest an alarming lack of knowledge of SAD among educational professionals. It is widely acknowledged that early recognition and intervention is critical to prevent the development of a chronic course of the disorder (Den Boer & Dunner, 1999; Spence et al., 1999; Stein, 1997; Walker & Kjernisted, 2000). Given their frequent interaction with adolescents, educational providers are positioned to serve an integral role in the identification of SAD in adolescent populations. In addition, given that behavioral inhibition and shyness in childhood often precede the development of SAD, both educators and clinicians are in positions to identify and intervene with children at risk for the disorder. Future research is needed to assess the knowledge of other professionals, especially clinical child

psychologists. These professionals are uniquely positioned to foster heightened awareness of SAD by conducting further research on the disorder, disseminating information about the disorder to both parents and other professionals, and increasing recognition of SAD in clinical settings.

References

- Beidel, D. C. (1998). Social anxiety disorder: Etiology and early clinical presentation. *Journal of Clinical Psychology, 59*(Suppl. 17), 27–31.
- Beidel, D. C., Turner, S. M., & Fink, C. M. (1996). Assessment of childhood social phobia: Construct, convergent, and discriminative validity of the Social Phobia and Anxiety Inventory for Children (SPAI-C). *Psychological Assessment, 8*, 235–240.
- Beidel, D. C., Turner, S. M., & Morris, T. L. (1999). Psychopathology of childhood social phobia. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*, 643–650.
- Black, B. (1992). Anxiety disorders. *New Directions for Mental Health Services, 54*, 65–70.
- Blum, R., & Bearinger, R. (1990). Knowledge and attitudes of health professionals toward adolescent health care. *Journal of Adolescent Health Care, 11*, 289–294.
- Brady, E., & Kendall, P. (1992). Comorbidity of anxiety and depression in children and adolescents. *Psychological Bulletin, 111*, 244–255.
- Burke, R., & Stephens, R. (1999). Social anxiety and drinking in college students: A social cognitive theory analysis. *Clinical Psychology Review, 19*, 513–530.
- Craske, M. G. (1999). *Anxiety disorders: Psychological approaches to theory and treatment*. Boulder, CO: Westview.
- Den Boer, J. A., & Dunner, D. L. (1999). Physician attitudes concerning diagnosis and treatment of social anxiety disorder in Europe and North America. *International Journal of Psychiatry in Clinical Practice, 3*, S13–S19.
- Essau, C. A., Conradt, J., & Petermann, F. (1999). Frequency and comorbidity of social phobia and social fears in adolescents. *Behaviour Research and Therapy, 37*, 831–843.
- Ginsburg, G. S., La Greca, A. M., & Silverman, W. K. (1998). Social anxiety in children with anxiety disorders: Relation with social and emotional functioning. *Journal of Abnormal Child Psychology, 26*, 175–185.
- Hartup, W. W. (1996). The company they keep: Friendships and their developmental significance. *Child Development, 67*, 1–13.
- Hayward, C., Killen, J. D., Kraemer, H. C., & Taylor, C. B. (1998). Linking self-reported childhood behavioral inhibition to adolescent social phobia. *Journal of the American Academy of Child & Adolescent Psychiatry, 37*, 1308–1316.
- Heimberg, R. G., Stein, M. B., Hiripi, E., & Kessler, R. C. (2000). Trends in the prevalence of social phobia in the United States: A synthetic cohort analysis of changes over four decades. *European Psychiatry, 15*, 29–37.
- Herbert, J. D., & Dalrymple, K. (in press). Social anxiety disorder. In A. Freeman & S. Felgoise (Eds.), *Encyclopedia of cognitive behavior therapy*. Norwell, MA: Kluwer.
- Kashdan, T. B., & Herbert, J. D. (2001). Social anxiety disorder in childhood and adolescence: Current status and future directions. *Clinical Child and Family Psychology Review, 4*, 37–61.
- Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshelman, S., et al. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archives of General Psychiatry, 51*, 8–19.
- 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.

- Last, C. G., & Strauss, C. C. (1990). School refusal in anxiety disordered children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29, 31–35.
- Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1998). Major depressive disorder in older adolescents: Prevalence, risk factors, and clinical implications. *Clinical Psychology Review*, 18, 765–794.
- Liebowitz, M. R., Gorman, J. M., Fyer, A. J., & Klein, D. F. (1985). Social phobia: Review of a neglected anxiety disorder. *Archives of General Psychiatry*, 42, 729–736.
- Sciutto, M. J., Terjesen, M. D., & Bender-Frank, A. S. (2000). Teachers' knowledge and misperceptions of attention deficit/hyperactive disorder. *Psychology in the Schools*, 37, 115–122.
- Shaffer, D., Fisher, P., Dulcan, M. K., Davies, M., Piacentini, J., Schwab-Stone, M. E., et al. (1996). The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): Description, acceptability, prevalence rates, and performance in the MECA study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 35, 865–877.
- Spence, S. H., Donovan, C., & Brechman-Toussaint, M. (1999). Social skills, social outcomes, and cognitive features of childhood social phobia. *Journal of Abnormal Psychology*, 108, 211–221.
- Strauss, C. C., Frame, C. L., & Forehand, R. (1987). Psychosocial impairment associated with anxiety in children. *Journal of Clinical Child Psychology*, 16, 235–239.
- Strauss, C. C., Lahey, B. B., Frick, P., Frame, C. L., & Hynd, G. W. (1988). Peer social status of children with anxiety disorders. *Journal of Consulting and Clinical Psychology*, 56, 137–141.
- Stein, M. B. (1997). Phenomenology and epidemiology of social phobia. *International Clinical Psychopharmacology*, 12(Suppl. 6), S23–S26.
- Turner, S. M., Beidel, D. C., & Townsley, R. M. (1990). Social phobia: Relationship to shyness. *Behaviour Research and Therapy*, 28, 497–505.
- Velting, O. N., & Albano, A. M. (2001). Current trends in the understanding and treatment of social phobia in youth. *Journal of Child and Adolescent Psychiatry*, 42, 127–140.
- Walker, J. R., & Kjernisted, K. D. (2000). Fear: The impact and treatment of social phobia. *Journal of Psychopharmacology*, 14(Suppl. 1), 13–23.
- Weisz, J. R., Suwanlert, S., Chaiyasit, W., & Walter, B. R. (1987). Over- and undercontrolled referral problems among children and adolescents from Thailand and the United States: The *wat* and *wai* of cultural differences. *Journal of Consulting and Clinical Psychology*, 55, 719–726.
- Wittchen, H. U., Stein, M. B., & Kessler, R. C. (1999). Social fears and social phobia in a community sample of adolescents and young adults: Prevalence, risk factors and comorbidity. *Psychological Medicine*, 29, 309–323.
- Zamorski, M. A., & Ward, R. K. (2000). Social anxiety disorder: Common, disabling and treatable. *Journal of the American Board of Family Practice*, 13, 251–260.

Received February 19, 2003

Accepted November 1, 2003