
AVOIDANT DISORDER OF CHILDHOOD AND SOCIAL PHOBIA

Deborah C. Beidel, PhD, and Tracy L. Morris, PhD

Sociability and inhibition are two basic dimensions of personality,^{21,86} and studies have demonstrated that these two constructs represent distinct traits.²³ Often referred to as shyness, *behavioral inhibition* is the tendency for some children to respond to novel situations and unfamiliar people by ceasing play activity, becoming quiet, and retreating to familiar individuals and circumstances.³⁹ In contrast, *sociability* refers to a preference for affiliation and the companionship of others rather than solitude.²¹ Thus sociability refers to the desire for social affiliation, whereas shyness (or behavioral inhibition) refers to distress and inhibited behaviors when such social interactions occur. Among children, differences in the extent of sociability and inhibition can be detected from an early age and are stable across periods of developmental change.^{20,39} Although children vary significantly along these dimensions, those with a strong desire for social encounters but who manifest such extreme inhibition in social situations that their social development is impaired may be at risk for the development of an anxiety disorder. Currently children who display these behaviors may meet diagnostic criteria for *social phobia* or *avoidant disorder of childhood and adolescence*.

DEFINITION

According to DSM-III-R,³ *social phobia* is "a persistent fear of one or more situations (the social phobic situations) in which the person is exposed to possible scrutiny by others and fears that he or she may do something or act in a way that will be humiliating or embarrassing." Based on adult retrospective reports, the average age of onset is early to midadolescence.^{59,93} Cases of social phobia, however, have

From the Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston, South Carolina

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been documented in children as young as age 8 years,¹⁰ and Last et al⁵³ reported an average age of onset of 11.3 years, based on a child and adolescent clinic-referred sample.

Avoidant disorder of childhood or adolescence (hereafter referred to as avoidant disorder) is defined as "excessive shrinking from contact with unfamiliar people, for a period of 6 months or longer, sufficiently severe to interfere with social functioning in peer relationships."³ Children with this disorder express a desire for social involvement with familiar people and usually have satisfying relationships with them. The diagnosis is not given before age 2½ years to differentiate it from developmentally appropriate stranger anxiety. Last et al⁵³ reported an average age of onset of 8.2 years for avoidant disorder.

Although discussed in the psychiatric literature for at least the past 22 years,⁶² the diagnoses of social phobia and avoidant disorder were formally introduced into the American diagnostic nomenclature with the publication of DSM-III.² Thus although it is likely that earlier descriptions of shy and withdrawn children bear some similarity to these clinical conditions, extrapolation from those samples to the DSM-III-R diagnostic categories is difficult. The minimal empiric data on these conditions means that at times we draw from the shyness and inhibition literatures as well as the adult social phobia literature. Our discussion, however, is focused primarily on the DSM-III-R disorders. Finally, although recently *elective mutism* has been hypothesized to be a form of social phobia,³⁶ a discussion of that condition is not included here (see article by Leonard and Topol in this issue).

CLINICAL PRESENTATION

Because of the significant overlap in behavior between social phobia and avoidant disorder, many of the signs and symptoms are essentially the same; that is, both involve anxiety and distress precipitated when in the company of others. The clinical descriptions of avoidant disorder, similar to adults with avoidant personality disorder, however, appear to represent the extreme end of the social anxiety continuum, manifesting the most pervasive distress across the broadest range of interpersonal situations. Children with avoidant disorder are often shy or withdrawn. Despite warm and satisfying relationships with family members, these children hide when unfamiliar individuals approach. Sometimes children play with a single other child but leave if another child attempts to join in the activities. Despite these clinical observations, avoidant disorder has been the subject of only limited empiric investigation; thus the discussion of symptoms is constrained primarily to what is known about children with social phobia.

Children with social fears frequently present with avoidance of social interactions. These children often have few friends, are reluctant to join in athletic events, and sometimes refuse to attend school to avoid social encounters. A reluctance to join or reticence to participate in social encounters is often an indicator of social anxiety. Although children with avoidant disorder appear to have a general, extreme fear of people, those with social phobia sometimes can identify a specific behavior that precipitates their distress. The diagnosis of social phobia, however, encompasses more than public speaking anxiety. For example, 25 social phobic children endorsed distress in the following situations (in order of decreasing frequency): formal speaking (88.8%), eating in front of others (39.3%), going to parties (27.6%), writing in front of others (27.6%), using public rest rooms (24.1%), speaking to authority figures (20.7%), and informal speaking situations (13%).¹¹ Many of these situations involve performing specific behaviors (writing, eating, and speak-

ing), but others involve more general conversational interactions. Among adults with social phobia, the percentage of those who are anxious only when performing specific activities (sometimes termed the *specific subtype*) and those with more generalized social fears (known as the *generalized subtype*) is a matter of some controversy, as is the exact procedure used to make this distinction.⁹⁵ Subtype distinctions have not yet been addressed in child or adolescent populations. Based on some preliminary data from our clinic, however, social phobic children endorse an average of 2.3 anxiety-producing situations. Thus a substantial number could be considered to suffer from the generalized subtype.

As already noted, there is a broad range of potentially anxiety-producing social interactions. Based on daily diary ratings collected during a 2 week period, children with social phobia reported that a distressful event occurs approximately every other day, significantly more often than normal control children.¹⁰ Sixty percent of the events occurred at school, and the most commonly occurring distressing event was an unstructured peer encounter (e.g., having to talk to another child), followed by tests, performing in front of others, and reading aloud. The social phobic children were significantly more likely to respond negatively to the occurrence of these events, and a number of these negative coping responses (8%) involved behavioral avoidance. As noted earlier, although formal speaking situations are the most universally feared event among social phobic children, the most frequently occurring distressful encounter is one that entails interpersonal conversation. Thus clinicians need to be attuned to the potentially anxiety-producing consequences of interpersonal encounters.

With respect to physical symptoms, trembling, sweating, heart palpitations, and blushing are among the most prevalent complaints of socially phobic adults, and it has been suggested that social phobia is associated with dysfunction of the beta-adrenergic system.³⁷ When 24 children with social phobia or overanxious disorder were asked to report which physical symptoms occurred when they were in situations that made them fearful, the most commonly endorsed complaints included heart palpitations (70.8%), shakiness (66.7%), flushes or chills (62.5%), sweating (54.2%), and nausea (54.2%).¹² Thus these responses are consistent with those of socially phobic adults. In addition, when children with social phobia read aloud in front of others and pulse rate was monitored directly, the increase over baseline was higher than for overanxious children or normal controls.¹⁰ Similarly, when taking a test (another situation that may invoke fear of negative evaluation by others), children with social phobia had increased pulse rates (compared with baseline). The overanxious children had a decrease in pulse rate, whereas there was no change for the normal control group. The increased pulse rate responses of the social phobic group are consistent with responses for social phobic adults and what would be expected if the child was suffering from a phobic disorder.

Although social phobia exists in children and adults, this does not necessarily guarantee that the condition manifests itself similarly across different developmental stages. Beidel and Turner¹³ compared the clinical presentation of social phobic children and adults and found many similarities and only a few differences. For example, prevalence rates based on epidemiologic studies were similar for adults and children (see Epidemiology). In addition, comorbid diagnoses (see Differential Diagnosis) of generalized anxiety disorder (in adults), overanxious disorder (in children), and simple phobia (in both adults and children) also were common among individuals with social phobia.^{13,54,92} Both adults and children endorsed distress across a broad range of potentially fearful social situations, and formal speaking was the most commonly endorsed fear. As noted earlier, the physical complaints characteristic of social phobic adults also were common for children with this disorder.

When in anxiety-producing situations, however, children did not report the occurrence of negative cognitions with the same frequency as has been reported for adults.

In addition to these specific physical and behavioral manifestations, social phobic children and adolescents had significantly higher levels of depressed mood (as measured by the Children's Depression Inventory) and more severe fears of criticism and of failure (as measured by the Fear Survey Schedule for Children—Revised) than normal controls.³⁰ Similarly, children with avoidant disorder also had significantly higher depression scores than a normal control group but did not differ from the controls on the Fear Survey Schedule subscales. Beidel¹⁰ found that children with social phobia had more severe trait anxiety, less confidence in their cognitive abilities, and a strong tendency toward a more rigid temperamental style. This last factor is consistent with the obsessive-compulsive personality style found among a high proportion of social phobic adults.⁹²

DIFFERENTIAL DIAGNOSIS

Social phobia and avoidant disorder can be differentiated from most other anxiety disorders by closely examining the core fear. For example, individuals with panic disorder fear the onset of physical symptoms and entrapment in a situation in which they would be unable to get help. Marks⁶² stated that panic disorder patients fear the crowd, whereas social phobics fear the individuals that make up the crowd. In contrast, simple phobias encompass fears of objects or situations that do not involve social encounters or fear of a panic attack. Thus such a distinction is usually quite easy. Separation anxiety disorder refers to excessive concern about separation from a major attachment figure. The child expresses concern that something will happen to himself or herself, parents, or someone else who serves in a major caretaker role. Thus to some extent, separation anxiety disorder involves estrangement from others, whereas social phobia and avoidant disorder entail distress over approach or interaction with others. In reality, however, the distinction is not quite so simple, and these disorders often coexist (see Comorbidity section).

The most difficult differential diagnosis is that of overanxious disorder versus social phobia. Similar to social phobia, overanxious disorder encompasses fears of a social-evaluative nature (i.e., worry about the appropriateness of past behavior; concern about competence in academic, athletic, or social areas; and marked self-consciousness⁴). Thus there is significant overlap in the diagnostic criteria. Beidel¹⁰ reported that although social phobics could be differentiated from normal controls based on a number of different criteria, children with overanxious disorder could be distinguished from normal controls based only on their significantly higher trait anxiety and an absence of either positive or negative coping responses when faced with an anxiety-producing situation (e.g., they worried, but their anxiety did not seem to interfere with their daily functioning). A discriminant function analysis, however, indicated that children with social phobia could be differentiated from those with overanxious disorder based on trait anxiety scores, baseline pulse rates, and self-perception of cognitive competence. Thus although overlapping, these conditions do not appear to be identical, and it has been proposed that overanxious disorder, as currently defined, may actually describe a subsyndromal state rather than a distinct disorder.¹⁰ In any case, the overlap among childhood anxiety disorders often makes diagnostic distinctions difficult.

A recent review by Levin et al⁵⁸ concluded that social phobia may be biologically distinct from other anxiety disorders. First, adults with this disorder differ from

panic disorder patients based on their responses to lactate infusion and carbon monoxide inhalation. Second, social phobic adults respond to treatment with monoamine oxidase inhibitors. As noted by Levin et al,⁵⁸ this specific response profile provides some evidence to suggest that the central dopaminergic system may play a role in social phobia, although the data are not yet conclusive. Interestingly a series of case reports on the treatment of Tourette's syndrome with haloperidol indicated that 15 of 90 patients (both adults and children; 17%) exhibited increased and severe social anxiety precipitated by the medication.⁶⁴ Given that haloperidol inhibits central dopaminergic systems, these case reports could provide ancillary support for a dopamine hypothesis of social phobia. Nonetheless, the fact that these symptoms were precipitated in fewer than 20% of the patients indicates that other factors clearly play a role in differentiating social phobia from other anxiety disorders.

As noted earlier, a substantial percentage of children and adolescents with social phobia present with additional Axis I disorders, complicating attempts at differential diagnosis. Based on a community sample of 25 children with social phobia, 6.9% had a secondary diagnosis of overanxious disorder and 3.4% had a secondary diagnosis of simple phobia. In addition, 10% of children with a primary diagnosis of overanxious disorder had a secondary diagnosis of social phobia.¹¹ Using a sample of children referred for treatment to an anxiety disorders clinic, Last et al⁵³ reported that of 61 socially phobic children, 86.9% had an additional anxiety diagnosis, and 55.7% had a comorbid depressive disorder. In addition, social phobia was diagnosed as a comorbid condition in 19% of 84 children with primary separation anxiety disorder, 56.9% of 51 children with primary overanxious disorder, and 55% of those with a primary diagnosis of major depressive disorder. With respect to avoidant disorder, 90% of the 20 children in the sample had an additional anxiety disorder (for 65%, the comorbid diagnosis was social phobia), and 35% had a depressive disorder. Similarly, Francis et al³⁰ reported rates of comorbidity for children with a primary diagnosis of social phobia or avoidant disorder and a group comorbid for social phobia and avoidant disorder. Rates for comorbid anxiety disorders among these children were 79% for social phobia ($n = 33$), 91% for avoidant disorder ($n = 19$), and 100% for social phobia and avoidant disorder ($n = 12$). The most common comorbid condition was overanxious disorder, present in 58%, 39%, and 83% of the three diagnostic groups. Comorbid affective disorders were present in 37%, 24%, and 33%. As already noted, the substantial rate of comorbidity between social phobia and overanxious disorder is consistent with the comorbidity rates for social phobia and generalized anxiety disorder found in adult populations, but the higher percentages among clinic-referred children and adolescents also may reflect the overlapping criteria for the former two conditions or the limitations of the current diagnostic system.

EPIDEMIOLOGY

Several large epidemiologic studies have reported that social phobia affects approximately 1% of the general population of children and adolescents. For example, Anderson et al⁴ reported a 0.9% prevalence rate among 11-year-old children. Similarly, McGee et al⁶³ found a 1.1% prevalence rate of social phobia among 15-year-old children. This rate, however, may be an underestimate because in that study fear of public speaking was included as a simple phobia. Another cross-sectional study of children aged 8, 12, or 17 years, however, also reported a 1.0% prevalence rate.⁴² To our knowledge, there are no general population data pertaining to the rates of avoidant disorder.

Based on clinic-referred children, Last et al⁵³ reported that 14.9% had a primary diagnosis of social phobia and 2.7% had a primary diagnosis of avoidant disorder. Although Last et al⁵³ reported that 45% of their avoidant disorder sample and 44.3% of their social phobic sample were female, Beidel and Turner¹³ reported that females constituted 70% of their social phobic sample. The differences in the male-to-female ratio may reflect differences in the sampling procedures. It should be noted, however, that the Beidel and Turner¹³ ratio was consistent with the Epidemiological Catchment Area data for the general population of adults with this disorder. Thus samples based on clinic-referred patients may reflect a particular selection bias (i.e., those who choose to seek treatment) that is not seen in the general population.

ETIOLOGY

According to behavioral theories of anxiety, fears can be acquired through traumatic conditioning, observational learning, or information transfer.⁷³ Although mode of acquisition data is not available for child or adolescent samples, retrospective reports from adult samples are available. Surveying a sample of adult social phobics, 58% reported that the onset of social fear followed a traumatic event.⁷¹ Turner et al⁹⁷ divided their adult clinic sample of social phobics into specific and generalized social phobia subtypes. Of this sample, 56% (specific subtype) and 40% (generalized subtype) reported the occurrence of specific traumatic events.

Psychoanalytic theory views anxiety as a maladaptive response to conflict over sexual or aggressive impulses.⁴⁴ Traditionally early life experiences have been considered to play an important role in psychodynamic theories of anxiety disorders. Nonetheless, the role of early experiences is not specific to psychodynamic theory, and to date there have not been empiric studies examining social phobia or avoidant disorder from a psychodynamic perspective.

There are few studies directly addressing familial factors in social phobia and avoidant disorder. Last et al,^{52,53,54} however, have published a series of articles assessing anxiety disorders in children and their families of which social phobia and avoidant disorder were included. In the latest of this series of publications,⁵² familial rates of anxiety disorders were examined for children with DSM-III-R anxiety disorders ($n = 94$), attention deficit hyperactivity disorder (ADHD) ($n = 58$), or normal controls ($n = 87$). The percentage of families having at least one first-degree relative with an anxiety disorder was 69.9%, 50%, and 40.5% for the anxiety, ADHD, and normal control groups. Although these differences were significant, the percentages of families with an anxiety disorder was quite high for all the groups. With respect to the familial aggregation of a specific disorder among first-degree relatives, social phobia and avoidant disorder were significantly more prevalent among the first-degree relatives of the anxious children when compared with the normal controls, but there was no difference in prevalence rates for these disorders between the anxiety and ADHD groups. Perhaps most important, however, the relatives of children with social phobia were no more likely to have social phobia themselves than were the relatives of children with ADHD or the normal control group. The same finding occurred for children diagnosed with avoidant disorder. The results of this study indicate that although there was a significantly higher rate of anxiety disorders in the relatives of anxiety-disordered children, there was no specific relationship between the anxiety disorder of the proband and that diagnosed in the relative. Interestingly this same pattern was reported by Torgersen⁸⁵ in his study of adult twins.

Rosenbaum et al⁷⁵ examined the presence of anxiety disorders in the parents and siblings of children who were identified as behaviorally inhibited or uninhib-

ited. Normal control children were also included in the investigation. It should be noted that previous studies did not find a significantly higher rate of social phobia or avoidant disorder in behaviorally inhibited children than in uninhibited children or a normal comparison group, although there was a significantly higher rate of over-anxious disorder in the behaviorally inhibited children when compared with the normal control group.¹⁸ Compared with parents of uninhibited ($n = 35$) and normal control children ($n = 35$), however, the parents of children with behavioral inhibition ($n = 40$) had significantly higher risks for (1) more than two anxiety disorders, (2) the presence of a childhood anxiety disorder, and (3) a continuing anxiety disorder (from childhood through adulthood). Interestingly these results were accounted for by the presence of *social phobia* (17.5%, 0%, and 2.9%), *avoidant disorder* (15%, 0%, and 0%), and *overanxious disorder* (37.5%, 11.4%, 8.6%) in the inhibited, uninhibited, and normal control children's parents. There were no differences among the three groups for any of the other anxiety disorders. This study provides some of the strongest evidence for a relationship between behavioral inhibition, social phobia, and avoidant disorder. Although these data suggest that there may be a familial predisposition toward the development of social fears, the specific mechanisms (biologic, environmental, or both) remain to be elucidated.

Studies addressing the possibility of a specific biologic cause or predisposition based on samples of socially phobic and avoidant children are not available. An interesting model for the development of social fears, however, based on constitutional predisposition and environmental factors, was presented by Ohman.⁶⁸ The applicability of this model to the case of social phobia has been discussed previously by Turner and Beidel.⁹¹ Ohman⁶⁸ suggested that the critical period for the development of social fearfulness is late adolescence or early adulthood. In this model, social fear is one end of a behavioral continuum that is anchored on the other end by social dominance. Nonhuman primates live in social groups in which hierarchies are formed based on social status. Status is determined by expressions of dominance among group members. Those who respond to these expressions with fearfulness or submission occupy lower positions on the social hierarchy. As extrapolated to social phobia,⁹¹ it is during the time period when children are confronted with the task of establishing themselves within a new social system (in this case, peer groups) that one is likely to see the onset of social phobia or avoidant disorder. Those who are constitutionally vulnerable (perhaps as a result of higher trait anxiety or behavioral inhibition) are likely to respond to this challenge with anxious or withdrawn behaviors, thereby lowering their social status. Although a full explanation of the relationship of Ohman's hypotheses to the development of social phobia and avoidant disorder is beyond the scope of this article (the reader is referred to Turner and Beidel⁹¹ for a complete discussion), this model has heuristic value for further investigations into the etiologic factors of these disorders.

TREATMENT

As with any presenting problem, a complete assessment should be conducted before initiating treatment. Areas to be assessed include symptoms, developmental history (medical and psychological), family functioning, school performance, and peer social relationships. The main purposes of a comprehensive assessment are to obtain information necessary for determination of differential diagnosis, to identify coexisting pathology that may compound the presenting problem, and to assist in the formulation of a treatment plan. Following the assessment, the treating clinician may want to consider one or more of the following strategies.

Educational and Family Interventions

To date, controlled studies using family-based or educationally based treatments for social phobia or avoidant disorder are not available. Before initiating any form of treatment, however, it is important that family members clearly understand the parameters of these disorders. In addition, Kagan et al⁴¹ noted that behaviorally inhibited children became less inhibited when their mothers recognized the temperamental style and made attempts to expose the child to peer interactions. Although it is unclear if this type of parental intervention would be as effective for children with DSM-III-R disorders, the use of parents as adjunct therapists is an area in critical need of study.

Psychodynamic Therapy

Trautman⁸⁹ provided a review of psychodynamic theories of anxiety in children. An understanding of the child's underlying fears is obtained through therapeutic play, drawings, and sessions with family members. Issues of treatment focus include separation, autonomy, and self-esteem. The goal of contemporary psychodynamic treatment is to provide a corrective emotional experience for the child that fosters the development and expression of age-appropriate behavior. Empiric data on the efficacy of psychodynamic treatment for childhood social phobia and avoidant disorder are not available.

Cognitive-Behavioral Therapy

Cognitive perspectives emphasize the role that cognitive processes play in mediating and regulating overt behavior. The focus of cognitive treatment with socially anxious children has been on modifying maladaptive self-statements that may interfere with social approach behaviors. Zatz and Chassin¹⁰³ reported that test-anxious children frequently engage in negative self-talk (e.g., I'm stupid; I'm going to fail the test). Socially anxious children have been found to engage in similar self-dialogue (e.g., everyone is looking at me; what if I do something wrong?⁸⁰). Cognitive restructuring procedures (based on Lazarus⁵⁵) are commonly used in clinical practice, with an emphasis on promoting positive coping and competency statements ("I will have fun at this party"). Controlled investigations of the effectiveness of the procedure with avoidant and socially phobic children, however, have not been made.

Behavioral Treatment

Although there have been no empiric studies of behavioral treatments for children specifically identified as meeting diagnostic criteria for avoidant disorder or social phobia, several related investigations have included children with school refusal who displayed significant social anxiety. In addition, there is a large body of literature on the treatment of children identified as shy, socially isolated or withdrawn, or peer neglected. The characteristics of these various groups suggest considerable overlap with social phobia and avoidant disorder. For example, peer-neglected children reported high rates of social anxiety,⁵⁰ and children with an anxiety disorder are more likely to be classified as peer neglected than both psychiatric and

nonpsychiatric controls.⁸⁴ Turner et al⁹⁶ provided a review of the relationship between shyness and social phobia in adult populations.

Counterconditioning Procedures

One of the most commonly used treatments for phobias is *systematic desensitization*.¹⁰² The central assumption is that fearful behavior can be reduced by pairing the fearful object or event with incompatible stimuli (nonfearful), such as food, praise, pleasant imagery, or muscle relaxation. Systematic desensitization with children consists of three basic steps: (1) training in deep muscle relaxation (see Morris and Kratochwill⁶⁵ for description of the progressive relaxation procedure), (2) rank ordering of fearful situations from lowest to highest, and (3) presenting the items in the hierarchy while the child is relaxed. Such procedures appear to work well with older children and adolescents (see Barrios and O'Dell⁹ for a review). Younger children, however, may have difficulty with both the imaginal presentation of fear stimuli and the acquisition of the incompatible muscular relaxation response.⁶⁹ Real-life presentation of the items and pairing the fearful event with a child's favored superhero (such as Batman) may be more effective with younger children.^{38,56,98} *Graduated exposure* is another term to describe the progressive in vivo exposure to fearful stimuli but does not necessarily involve the use of relaxation training. Finally, *reinforced practice* is an extension of graduated exposure whereby the child is provided with a reward for remaining in the presence of anxiety-arousing stimuli for progressively longer periods of time.⁵⁷ Counterconditioning strategies appear effective for the treatment of social fears, although modifications may be necessary based on the child's age.

Contingency Management

Some behavioral approaches (operant procedures) rely on the basic concepts of reinforcement, punishment, and stimulus control articulated by Thorndike⁸⁷ and Skinner.⁷⁹ Operant techniques commonly have been used in the treatment of social withdrawal.¹⁰⁰ Treatment is based on the assumption that socially isolated children have the necessary repertoire of social skills but have not been adequately reinforced for engaging in social behavior or have been inadvertently reinforced for nonsocial behavior. Treatment entails arranging the school and home environments to encourage the child to engage in social interactions and to provide reinforcement (in the form of praise or a tangible reward) when they interact appropriately. Thus contingency management procedures would be appropriate for children who have the necessary social skills but are not using them in social settings.

Modeling

Modeling procedures (observation of another individual's behavior and the resulting consequences⁸) have proved effective in the treatment of anxious and socially avoidant behavior.^{9,67} Modeling consists of the demonstration of appropriate behavior in the presence of anxiety-arousing stimuli. Following the demonstration, the child is instructed to imitate the model's performance. Repeated trials are conducted, with feedback and reinforcement provided for behavior that approximates that of the model. Thus modeling would be necessary for children who do not know how to interact with others. The opportunity for direct observation of appropriate behavior would be necessary for these children. Three modeling variations have been used. In the first two, the child (filmed or live) model displays progres-

sively more interaction with the feared object or person. In participant modeling, the therapist (or nonanxious peer) provides support and physically guides the child through the anxiety-arousing situation. Ollendick⁶⁹ has suggested that participant modeling may be the most effective, whereas filmed modeling is least effective. Modeling has been demonstrated to be somewhat effective with socially withdrawn preschoolers. For example, children showed an increase in social participation after viewing a modeling film depicting appropriate social behavior in the nursery school.⁷⁴ Measures of peer acceptance by the other children, however, did not change following the intervention. Thus modeling may enhance social participation but does not affect peer acceptance.

Social Skills Training

The majority of behavioral programs designed to remediate social withdrawal have assumed that socially isolated children lack the requisite skills necessary for successful social interaction. The rationale behind these programs is that if withdrawn children can acquire these skills, the development of social relationships is facilitated. Typically social skills training (SST) programs provide the target child with instruction in specific behaviors (e.g., smiling, eye contact, initiations, conversational skills), filmed or in vivo modeling of effective social behaviors, opportunities to practice the behaviors, and verbal feedback in regard to appropriateness of response. SST programs have been successful in increasing the frequency of the specific target behaviors trained.⁵¹ These programs, however, have not generally proved useful in increasing social acceptance of these children by their peers.^{16,88,101}

Peer-Mediated Approaches

Strain and Fox⁸² have suggested that treatments for social isolation that incorporate a child's peers (i.e., peer mediated) may be superior to adult-mediated approaches because the former may facilitate changes in both social behavior and peer acceptance. Peer-mediated interventions generally have focused on providing peers with rewards or training to increase their rate of social interactions with target children.^{25,72,83} An alternate approach involves merely providing shy or withdrawn children with opportunities to engage in joint activities with popular, sociable peers. Neglected or rejected children are placed in small groups with popular children and given group tasks, such as preparing a skit for the class²⁴ or making a movie.⁶¹ Furman et al³¹ found that socially withdrawn preschoolers given the opportunity to interact with sociable playmates in free-play sessions showed increased peer interactions compared with no-treatment controls. A recent study of peer-neglected first-grade and second-grade children⁶⁶ provided further evidence for the effectiveness of peer-pairing because these children showed increases in both positive social interactions and peer acceptance.

Peer-pairing provides an environment conducive to positive social interaction. Popular peers may serve as ideal models of age-appropriate social behavior as well as provide positive reinforcement for social interaction. Interacting with a sociable peer also may serve to decrease anxiety and increase the child's confidence, which in turn may lead to more positive interactions. Peer-pairing appears relatively cost-effective and readily implemented by parents and teachers. For example, a parent of a shy child may invite a more gregarious child into the home to play. To date, however, studies of peer-pairing have not used populations selected specifically for anxiety. Therefore future studies investigating the utility of the approach with chil-

dren meeting diagnostic criteria for avoidant disorder or social phobia are warranted.

Pharmacologic Treatment

A number of pharmacologic agents have been found useful in the treatment of adults with anxiety disorders. Few placebo-controlled trials, however, have been conducted to evaluate the efficacy and risks of such treatment with anxiety-disordered children.

Perhaps the most commonly used anxiolytic agents are the benzodiazepines (e.g., diazepam, chlordiazepoxide, alprazolam). Early investigations^{27,46} suggested that chlordiazepoxide may be an effective agent in the treatment of school refusal. More recent studies have begun to address the effectiveness of alprazolam in reducing avoidant behavior. Simeon and Ferguson⁷⁷ reported a decrease in both child-rated and parent-rated symptoms following an uncontrolled trial of alprazolam in a group of children with overanxious and avoidant disorders. Significant improvements in cognitive functioning were also demonstrated for these children. A more recent controlled study of 30 children with avoidant or overanxious disorder⁷⁸ did not find a significant difference between alprazolam and placebo, although there was a tendency for those with avoidant disorder to improve more on the medication. Despite these positive effects, the empiric literature on the use of alprazolam in adults suggests that there may be problems with rebound anxiety and abuse potential of the drug. Also, studies examining the effect of long-term benzodiazepine use in children are lacking. Finally, the incidence of paradoxical reactions, such as disinhibition or aggression, with benzodiazepine use in children has not been adequately evaluated and although generally infrequent may be more frequent than with adults.⁴⁸

With respect to adult populations, phenelzine, a monoamine oxidase inhibitor, has received some empiric support in the treatment of social phobia in adults in several controlled trials.^{32,60} Also, a newer monoamine oxidase inhibitor (brofaramine), approved in several countries but not in the United States, has been reported to result in an 80% improvement rate.⁹⁹ The selective beta-adrenergic blocker, atenolol, has been less effective, with response rates ranging from 30% to 38% in controlled trials.^{60,94} Recent studies also have reported some positive results for the use of benzodiazepines in a controlled trial of alprazolam³² and clonazepam.²⁸ The relapse rate for alprazolam, however, is very high (80%).³² Finally, an open trial of fluoxetine¹⁹ reported that 10 of 14 patients (71%) had a moderate to marked improvement. The monoamine oxidase inhibitors appear to hold some promise for the treatment of social phobia. Despite such promise, controlled trials for the treatment of children with avoidant disorder and social phobia are lacking.

PROGNOSIS

As noted previously, the onset of social phobia typically begins in childhood or adolescence, and the mean duration of symptoms before seeking treatment frequently has been reported to be greater than 10 years.^{59,93} Thus as noted by Achenbach,¹ in contrast to fears of specific objects, childhood social fears are likely to be of a chronic and unremitting nature.

With respect to avoidant behavior, Strain⁸¹ suggested that the most powerful

behavioral predictor of adult social-adjustment problems is social withdrawal. Prospective studies of socially avoidant children, however, are scarce. In a 4-year follow-up investigation of children with communication and psychiatric disorders, Cantwell and Baker²² found avoidant disorder to be the most stable of the anxiety disorder diagnoses (29% maintained their initial diagnosis). Although it has been suggested that avoidant disorder may be a precursor to avoidant personality disorder, as yet there are no empiric data to support or refute such speculation.

An extensive literature on temperamental inhibition and socially withdrawn behavior in children is being amassed. Kagan et al³⁹ continue to follow a cohort of children initially assessed in infancy.⁴⁵ In another prospective study of children from kindergarten through fifth grade, Rubin et al⁷⁶ reported moderate stability for direct behavioral observations of social withdrawal, in addition to high stability for peer assessments of sociability and social withdrawal.

Empiric data regarding the long-term outcome of children with avoidant disorder and social phobia are lacking. Retrospective reports⁹⁶ indicated that some children outgrow their shyness. This group, however, may represent the less severe end of the continuum. Further, the severity of the disorders may wax and wane with life circumstances. Particularly needed are prospective investigations of socially anxious children to identify factors that lead to the development of clinically significant anxiety disorders.

RESEARCH CONSIDERATIONS

Although there is newly emerging interest in the assessment and treatment of social phobia and avoidant disorder in children, there has been a paucity of methodologically sound investigations, and many basic research questions remain. First, the substantial comorbidity among the anxiety disorders categories suggests the need for empiric clarification of the diagnostic criteria. Second, one of the major impediments to research in this area has been the lack of reliable and valid measures specifically designed for the assessment of DSM-III-R disorders. A new self-report instrument, the Social Phobia and Anxiety Inventory for Children (SPAI-C)¹⁵ has been developed to address social phobia and avoidant disorder in children. Data regarding the psychometric properties of the SPAI-C are forthcoming. Third, the lack of double-blind, placebo-controlled investigations limits the conclusions that can be made regarding the efficacy of pharmacologic treatment for these disorders in children. Although peer-mediated approaches to the treatment of social anxiety have demonstrated promise, further investigations regarding their effectiveness with children meeting criteria for avoidant disorder and social phobia are warranted. Of final concern is the need for empiric data regarding potential risk and protective factors in the development of these disorders. One such study of at-risk children⁹⁰ is currently underway.

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Address reprint requests to

Deborah C. Beidel, PhD
 Department of Psychiatry and Behavioral Sciences
 Medical University of South Carolina
 171 Ashley Avenue
 Charleston, SC 29425