

Social Anxiety Disorder: Etiology and Early Clinical Presentation

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Behavioral and biological theories addressing the etiology of social anxiety disorder are discussed. Although not often diagnosed until adolescence or adulthood, social anxiety disorder can have its onset during childhood. Early recognition and treatment of this condition may prevent both immediate and long-term detrimental outcomes and, possibly, the onset of comorbid conditions. However, special considerations are required for the diagnosis and treatment of childhood social anxiety disorder. Therapists face special challenges when treating youth with social anxiety disorder, including patient and parent considerations. Although not documented specifically for children with social anxiety disorders, data from families with anxious children suggest that familial factors may play a role in treatment outcome.
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Social anxiety disorder (social phobia) has a peak age at onset during mid-adolescence, but can be diagnosed during childhood; however, it is usually not until patients experience functional impairments as a result of their fears that they seek treatment.¹ The clinical presentation of childhood and adult social anxiety disorder is quite similar. Differences may simply reflect opportunities for engagement in different types of social situations and differing cognitive abilities that may limit young children's understanding of their disorder. Retrospective adult data suggest that early childhood onset predicts nonrecovery in adulthood.² Therefore, early diagnosis and treatment of social anxiety disorder may prevent long-term detrimental outcomes.³

Inheritable risk as well as familial and environmental factors have all been implicated in the development of social anxiety disorder.³⁻⁵ Furthermore, examining the evolution of social anxiety disorder has provided insights into specific factors that might be associated with the generalized and nongeneralized (specific) subtypes.⁶ This paper discusses what is known about the etiology and life cycle of social anxiety disorder. The unique features of diagnosis and management of childhood and adolescent social anxiety disorder are highlighted.

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SOCIAL ANXIETY DISORDER BEGINS DURING CHILDHOOD

Age at Onset

Social anxiety disorder has an early onset compared with other anxiety disorders. Data from retrospective reports of adults with social anxiety disorder indicate that the mean age at onset is in mid-adolescence (Table 1).^{1,7,8} However, social anxiety disorder can be detected in children as young as 8 years of age.³ Furthermore, subtypes of social anxiety disorder may have different mean ages at onset. Mannuzza et al.⁹ reported that the generalized subtype appeared earlier, with patients having a mean age at onset of 11 years, in contrast to a mean age at onset of 17 years for patients with the specific subtype.

Childhood Fears or Social Anxiety Disorder?

Many childhood fears are transitory, lasting perhaps a few days or weeks. However, children who show social fears retain this trait throughout late adolescence. An early study by Kagan and Moss¹⁰ examined several temperamental characteristics of young children, including aggressiveness, oppositional behavior, social fears, and other fears; only social fears were consistently expressed from early childhood through late adolescence. Other researchers (e.g., Achenbach¹¹) have confirmed that, unlike other childhood fears, social fears are nontransitory. Indeed, the National Institute of Mental Health's Epidemiologic Catchment Area Study indicated that onset of social anxiety disorder prior to 11 years of age predicts nonrecovery in adulthood.²

Childhood Versus Adult Social Anxiety Disorder

Examination of the clinical syndrome of social anxiety disorder suggests that children and adults have a similar

Table 1. Mean Age at Onset of Social Anxiety Disorder From Retrospective Studies

Study	Mean Age at Onset (y)	N
Turner et al ¹	16.2	72
Schneier et al ⁸	15.5	97
Thyer et al ⁷	15.2	42

Table 2. Somatic Symptoms of Social Anxiety Disorder*

Symptom ^a	Child	Adult
Palpitations	✓	✓
Trembling/shaking	✓	✓
Blushing	✓	✓
Sweating	✓	✓
“Butterflies”	✓	×

*Adapted from references 12 and 13. Symbols: ✓ = described, × = not described.

^aListed in the order first described.

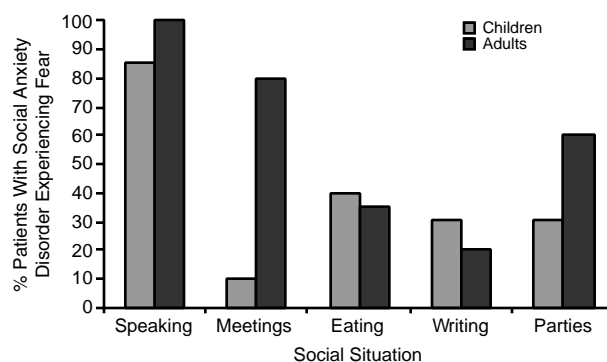
clinical presentation. For example, both children and adults report the presence of virtually identical somatic symptoms (Table 2). Palpitations, trembling/shaking, blushing, and sweating, in that order, were described by both children and adults with social anxiety disorder.^{12,13} The only difference was that children also frequently reported “butterflies in their stomach”—an expression that probably reflects a child’s limited ability to explain what he or she feels.

Remarkable similarity also exists between the types of common social situations feared by children and adults with social anxiety disorder (Figure 1) (reference 1 and D.C.B., S. M. Turner, T. L. Morris, unpublished data, 1998). Public speaking, whether it is a presentation at school or at work, was the most commonly feared social situation. Parties constituted another social situation that was similarly feared by children and adults with social anxiety disorder. One notable exception was that adults with social anxiety disorder often report fears of meetings (see Figure 1), a situation not generally encountered during childhood. Although many aspects of the clinical presentation of social anxiety disorder are similar for adults and children, one important difference is that unlike adults, children (particularly preadolescent children) commonly do not report the presence of negative cognitions. The most obvious explanation for this difference is that the child’s limited cognitive skills do not allow the child to adequately observe and/or report their own cognitive activities.

DEVELOPMENT OF SOCIAL ANXIETY DISORDER

Behavioral theories of the etiology of social anxiety disorder can be considered from 3 perspectives: direct conditioning, vicarious (observational) learning, and information transfer.^{5,14} Direct conditioning, in which fear de-

Figure 1. Common Social Situations Feared by People With Social Anxiety Disorder*



*Adapted from reference 1.

velops from exposure to a traumatic event, accounts for etiology in over 50% of subjects with social anxiety disorder.^{5,6,14} Vicarious learning (observing someone else engaged in a traumatic situation) accounts for a percentage of the acquisition of social anxiety disorder. Information transfer, in which information regarding social situations is verbally or nonverbally transmitted, also may account for the acquisition of social fears. Retrospective reports of adults with social anxiety disorder indicate histories of parental criticism of social behavior.¹⁵ Although the retrospective nature precludes drawing firm conclusions, such a scenario would be consistent with an information transfer etiology.

An examination of social anxiety disorder subtypes suggests that the generalized and specific groups may have different etiologies (Table 3). Direct conditioning, as a result of a traumatic event, was most commonly described as the cause of social anxiety disorder in subjects with the specific subtype.⁶ The generalized subtype of social anxiety disorder was largely characterized by childhood shyness. Neuroticism did not differentiate the 2 subtypes, but extroversion was lower in the generalized subtype.⁶

As noted, families may play a particularly important role in the behavioral etiology of social anxiety disorder. The fact that social anxiety disorder “runs in families” also may suggest a biological contribution to its etiology.⁴ Using patient self-assessment rather than clinical interview, a large study of female identical twins (N = 163) suggested a 30% heritability for phobias.¹⁶ Proband concordance for social anxiety disorder was reported as 24.4% between monozygotic twins and 15.3% between dizygotic twins.¹⁶ In addition to twin studies, other types of family studies also provide support for the contribution of biological factors. One family history study indicated that 6.6% of the relatives of a patient with social anxiety disorder also has the disorder (N = 76), compared with a prevalence of 2.2% in the relatives of normal controls (N = 46).¹⁷ In a blinded,

Table 3. Common Etiology of the Generalized and Specific Subtypes of Social Anxiety Disorder*

Etiology	Normal Control Subjects (N=25) %	Subjects With Social Anxiety Disorder Subtypes (N= 68)		
		All %	Generalized %	Specific %
Traumatic experience	20	44	40	56 ^a
Childhood shyness	52	72	76 ^b	56

*Adapted from reference 6.

^aSignificantly different from normal controls, $p < .03$.

^bSignificantly different from normal controls, $p < .02$.

family study in which the first-degree relatives (N = 83) of social anxiety disorder and control probands were interviewed directly, an increased risk of social anxiety disorder (16.6%) was observed in relatives of subjects with social anxiety disorder, compared with that of relatives (N = 231) of normal controls (5%).¹⁸ Some data suggest that the generalized subtype of social anxiety disorder may have a greater inheritable risk than the specific subtype. Social anxiety disorder was present in 16% of relatives of patients with the generalized subtype, compared with only 6% of relatives of either patients with the specific subtype or normal controls.⁹

The above studies address adult relatives of patients with social anxiety disorder. In addition, the prevalence of the disorder in children of adults diagnosed with social anxiety disorder indicates a familial link.¹⁹ Among all the children of adult probands with social anxiety disorder, 23% met DSM-III-R criteria for social anxiety disorder (social phobia; Table 4). A further 30% met criteria for DSM-III-R overanxious disorder, of which the criteria included social evaluative concerns (Table 4). If DSM-IV diagnostic criteria were used, many of these children would probably meet social anxiety disorder criteria; therefore, the prevalence of social anxiety disorder in the children of adult sufferers may be even higher than 23%. These prevalence data for high-risk groups can be compared to a lifetime risk of 13.3% for the general population²⁰ and thus indicate that there may be a biological factor contributing to the etiology of social anxiety disorder.

FAMILY ENVIRONMENT FACTORS IN SOCIAL ANXIETY DISORDER

As noted, families may influence the acquisition of social anxiety disorder by observational learning, information transfer, or heritable biological factors. In addition, parental or familial behaviors may contribute to the maintenance of the disorder and may even attenuate treatment outcome (D. C. B., S. M. Turner, T. L. Morris, unpublished data, 1998). For example, if children do not have the opportunity to engage in social interactions, they may not have sufficient opportunities to acquire social skills.²¹ Thus, parents who are anxious may restrict the child's op-

Table 4. Social Anxiety Disorder and Related Conditions in the Children of Adults With Social Anxiety Disorder*

Psychiatric Disorder	Prevalence, %	N
None	47	22
Any anxiety disorder	49	23
Overanxious disorder	30	14
Social anxiety disorder	23	11

*Adapted from reference 20.

portunities for socialization (to minimize their own distress) and therefore limit the acquisition of appropriate social skills. This restriction, in turn, limits further opportunities for social interaction. Other studies of family interactions demonstrate that parents may reinforce avoidant behaviors in anxious children. Family discussions can encourage children to avoid social interactions, even making children more avoidant in ambiguous hypothetical situations.^{22,23} In contrast, children without anxiety disorders become more prosocial after family discussion of ambiguous scenarios.²³

Family environment can also have positive effects on the development of a child's social skills. Some children become less inhibited if their parents make a concerted effort to place them in social situations.²⁴ It is not clear how far parental action can directly affect childhood social anxiety disorder, but it is clear that if a child avoids encountering social situations, opportunities to learn social skills will be limited. Furthermore, parents can influence social approach by their verbal or nonverbal behaviors.

BEHAVIORAL INHIBITION— A PRECURSOR OF SOCIAL ANXIETY DISORDER?

Some very young children show fear of unfamiliar situations, including unfamiliar social situations. Behavioral inhibition is defined as a fear of unfamiliar people, objects, situations, or events and may represent an early form of social anxiety disorder. Behavioral inhibition can usually be identified in children from about 2.5 years of age, although precursors to it have been detected as early as 4 months of age.²⁴ Early signs of behavioral inhibition suggest the existence of a biological predisposition. Furthermore, childhood behavioral inhibition is associated with a familial risk for anxiety disorders.²⁵ Also, a subset of children with behavioral inhibition are also at a greater risk of developing anxiety disorders, including overanxious disorder, social phobia, and separation anxiety disorder.²⁵ One cohort of children identified as behaviorally inhibited at 2.5 years of age now are adolescents. Diagnostic interviews with the adolescents indicate that those who were behaviorally inhibited as toddlers more frequently suffered from social anxiety disorder in early adolescence than uninhibited children; this association was not found with specific phobia, obsessive-compulsive disorder, or separation anxiety disorder.²⁴ However, before one

Table 5. Childhood Selective Mutism: Comorbidity and Family History*

Variable	Prevalence (N=30) %
Childhood/adolescent comorbidity	
Social anxiety disorder/avoidant disorder	97
Simple phobia	30
Family history ^a	
Social anxiety disorder	70
Selective mutism	37

*Adapted from reference 27.
^aFirst-degree relative.

concludes that behavioral inhibition is an early manifestation of social anxiety disorder, it should be noted that not all patients with social anxiety disorder show behavioral inhibition during childhood. Thus, although behavioral inhibition may be a risk factor for social anxiety disorder, it has yet to be established that it is either a necessary or sufficient etiologic factor.²⁶

ISSUES IN CHILDHOOD SOCIAL ANXIETY DISORDER

Diagnosis

It was only very recently that the severity of social anxiety disorder in children was recognized. Children, because of their limited cognitive development, often do not understand the severity and impact of the disorder upon their daily functioning. Thus, children rarely initiate treatment requests. Parents, even if they recognize that the disorder has some negative implications for development, sometimes are reluctant to force children to attend therapy sessions, particularly when the child is not exhibiting "bad" behaviors. Furthermore, social anxiety disorder often is mistaken for shyness, and there is an assumption that a child will "outgrow" it. Requests for intervention may only arise when a parent becomes concerned over the child's lack of friends or the exhibition of oppositional behaviors. Teachers do not often recognize the disorder, because a child with social anxiety disorder is quiet and often does not cause trouble. However, when social anxiety disorder is severe, children may refuse to participate in class activities such as reading aloud and writing on the blackboard. In the most severe cases, a child with social anxiety disorder may refuse to go to school. Although related to their extreme anxiety, this behavior often is misconstrued as truancy.

Selective Mutism

Selective mutism is characterized by a child's total lack of speech in certain social situations, particularly in the classroom, and is often associated with childhood social anxiety disorder and other anxiety disorders (Table 5).^{27,28} Recently, there has been a shift in the etiologic explanations for selective mutism, moving away from psychody-

namic factors and toward underlying temperamental and anxiety components.²⁹ Like social anxiety disorder, selective mutism in some cases could develop from a single traumatic event. It also shows familial risk factors.²⁹ Severity of social anxiety has been closely correlated with severity of selective mutism.^{27,28}

Diagnosis of social anxiety disorder in a child who displays selective mutism poses particular problems, not just because of the unlikelihood that the child will speak in the clinic situation but also because a child with selective mutism can be very defiant and oppositional, characteristics that upon initial presentation may overshadow the social anxiety disorder.³

Management

Because family history and family environment may be significant factors in the etiology and maintenance of childhood social anxiety disorder, consideration of these factors is a necessary part of the intervention. One of the first steps in the treatment of childhood social anxiety disorder is to engage the child in the therapeutic process; here, the use of small rewards for coming to appointments and participating in the sessions is often very effective. Of equal importance is to involve the child's parents in the treatment process. This includes ensuring that the parents understand the nature of disorder and that they are an integral part of the therapeutic process. Also of importance is maintaining the motivation and cooperation of the family during treatment.³

Some parents simply have poor child-management skills, which may impact their ability to participate in the treatment program. In some cases, poor child-management skills prevent the child from engaging in the very situations necessary for treatment success. In such cases, formal child-management training may be a necessary part of the process.

A proportion of parents of children with social anxiety disorder also have anxiety disorders, and in certain cases this may impact upon the child's treatment. For example, an adult suffering from social anxiety disorder is unlikely to provide the positive influences and social opportunities required to treat his or her child's problem.³ Thus, in some cases it may be necessary to advise the parent to seek treatment.

COMPLICATIONS OF ADOLESCENT SOCIAL ANXIETY DISORDER

When social anxiety disorder occurs during adolescence, further complications arise. Depression, perhaps as a result of loneliness and social isolation, is commonly associated with social anxiety disorder.³⁰ A prospective study indicated that those who experienced depression and an anxiety disorder during childhood had a more negative outcome with regard to their anxiety disorder in

adolescence than those who did not have comorbid depression during childhood.³¹ Social anxiety disorder in adolescence commonly leads to truancy, although often this is mistakenly considered as “merely” disruptive behavior rather than a secondary problem resulting from the anxiety disorder. Fighting, running away from home, and stealing during adolescence were reported significantly more often by adult sufferers of social anxiety disorder (N = 123) than by normal controls (N = 3678).²

Finally, in order to gain some degree of control over their fears, adolescents with social anxiety disorder often choose to use alcohol or other drugs. Clinically, patients report using alcohol before attending parties or other types of social interactions. The intent of the use is to help the patient feel less distress when engaged in the social interaction. Of 43 adolescents hospitalized for alcohol abuse, 40% met the criteria for an anxiety disorder, the most common of which (21%) was social anxiety disorder; these disorders were not as common in adolescents in the community.³²

CONCLUSIONS

Social anxiety disorder has a complex etiology, probably involving biological, psychological, and environmental factors. Subtypes of social anxiety disorder may have evolved differently, with childhood shyness common to the generalized subtype and a traumatic conditioning event often attributed to the specific subtype. Early diagnosis is crucial to prevent the predictable short-term and long-term detrimental outcomes.

The treatment of childhood social anxiety disorder presents unique problems in part because of the limited cognitive development of the child. Furthermore, children and parents often do not understand the disorder and the impact it can have on immediate or long-term development. Family environment also may play an important role in the maintenance of the disorder and therefore must be considered in relation to the overall clinical management of a child with social anxiety disorder. Finally, parental cooperation is central in the treatment of childhood social anxiety disorder, but this is sometimes confounded by the parents' understanding of the disorder, their ability to involve the child in therapy, and their own fears and anxieties.

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