# Cognitive-Behavioral Therapy for Social Anxiety Disorder: Model, Methods, and Outcome

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Cognitive-behavioral therapy for social anxiety disorder has typically emphasized cognitiverestructuring and exposure interventions, delivered alone or in combination, in either individual or group formats. Treatment programs emphasizing these interventions are associated with both acute improvements and longer term maintenance of treatment gains. In this article, the nature and application of these interventions are reviewed in relation to a cognitive-behavioral model of the development and maintenance of social anxiety disorder. Strategies for change and outcome findings are discussed, with attention to both individual studies and meta-analytic reviews of the literature. Strategies for improving outcomes and future directions for research are also discussed.

(J Clin Psychiatry 1999;60[suppl 9]:14–19)

Cognitive-behavioral therapy (CBT) for anxiety disorders has become increasingly specialized in the past decade, a consequence of advances in conceptualization of the nature of individual anxiety disorders. With better modeling of core fears and dominant behavior patterns defining and maintaining each disorder, it has become easier to target interventions to specific anxiogenic patterns. For this reason, it makes little sense to discuss treatment elements for social anxiety disorder without first discussing a conceptual model of the disorder.

#### A COGNITIVE-BEHAVIORAL MODEL OF SOCIAL ANXIETY DISORDER

Central to cognitive-behavioral models of social anxiety disorder are the negative expectations that patients bring to social situations.<sup>1–3</sup> These expectations typically include fears of poor social performance ("I had better not blow it again"; "I will stumble over my words and be unable to continue"), negative evaluations from others ("They will think I am weird"; "They will laugh at me"), and uncontrollable anxiety ("I will tremble and be unable

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to continue"). The natural result of these negative expectations is increased anxious apprehension, so that the socially anxious individual enters social situations hoping that negative outcomes will not occur but vigilant to their impending emergence.

Vigilance to potential negative outcomes can have two destructive effects. First, it can distract one's attention from more socially relevant behaviors, such as attending to the topic in a conversation, making eye contact, or responding to social cues; second, it ensures that negative events, even minor ones, will be perceived and interpreted in the context of anxious apprehension.

Even at this early stage of the conceptual model, it is easy to see how rapidly the information processing of an individual with social anxiety disorder may diverge from that of an individual who is confident in social situations. Instead of focusing attention on the conversation at hand, interesting or entertaining social events or cues, or the topic to be discussed in the next moment, the individual with social anxiety disorder must try to maintain his or her social performance while attending to a wide range of "off-task" thoughts and events, such as the sound of one's voice (in case it quavers), the burgeoning sweat on one's brow ("Will others notice, and what will they think?"), or the potential consequence of a short gap in conversation ("They will think I am stupid or boring"). If there is a quaver in one's voice, increasing sweat on one's brow, or a brief pause in conversation, the individual with social anxiety disorder is immediately confronted with the possibility that his or her worst fears of negative social evaluation are coming true. Increased anxiety, at times in panic proportions, is the natural result.

A number of maladaptive beliefs may further stoke the fires of anxiety and provide fuel for additional negative

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Presented at the symposium "New Frontiers in the Management of Social Anxiety Disorder: Diagnosis, Treatment, and Clinical Course." This symposium was held in conjunction with the 151st Annual Meeting of the American Psychiatric Association, May 31, 1998, Toronto, Ontario, Canada, and supported by an educational grant from SmithKline Beecham Pharmaceuticals.

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cognitions. These beliefs concern the meaning of minor mistakes or anxiety in social situations and help amplify the emotional response to these events in individuals with social anxiety disorder (Figure 1). Three beliefs in particular can help define minor events as catastrophes: (1) errors, even small errors, are evidence that a person is socially inept; (2) the anxiety response itself in social situations is a sign that a person is defective and a failure; and (3) any behavioral performance that diverges from "normal" is additional evidence that a person is defective and deserves to be rejected. Regardless of the actual level of social performance, these "amplifying cognitions" ensure that the individual with social anxiety disorder perceives social failure in response to subtle cues. Particularly important among these cues is the experience of anxiety itself. There is evidence that individuals with social anxiety disorder tend to believe that the way they feel is the way in which they are perceived by others.<sup>4</sup> Hence, feelings of dread and anxiety signal that negative social evaluations may be at hand. These considerations may help explain why patterns of social anxiety are maintained despite apparently adequate social performance.

All of these patterns-negative social expectations, vigilance to negative outcomes, increasing symptoms, and negative interpretations of symptoms and outcomes-motivate escape from and avoidance of social situations. These escape behaviors offer acute reductions in anxiety, but in turn lock in social fears by preventing disconfirmation of negative expectations. Every episode of social escape may be viewed by the socially anxious individual as a successful avoidance of a feared catastrophe. This pattern appears to be accurate even for subtle avoidance behaviors. Wells et al.<sup>5</sup> recently addressed the question of why the elimination of fears does not occur more naturally in individuals with social anxiety disorder who continue to "expose" themselves to social situations. They hypothesized that the answer may lie in subtle avoidance; namely, in the behaviors that individuals use to provide themselves with cues of safety. Safety behaviors may include such things as clenching one's hands (to hide trembling); holding a drink (to look natural); talking quickly, Figure 2. A Cognitive-Behavioral Model of Social Anxiety Disorder



avoiding eye contact, or taking deep breaths (to avoid freezing up in a conversation); or leaning against a wall (to feel braced in case of dizziness). Although these safety behaviors may increase confidence and ameliorate anxiety in the moment, they also may maintain social fears by creating the illusion of "lucky escapes" from potential social catastrophes. Accordingly, Wells and colleagues examined the outcome of exposure to social situations when patients were either encouraged to or discouraged from using their usual safety behaviors. Consistent with their hypothesis, the use of safety behaviors reduced the efficacy of exposure, hampering the ability of patients to use exposure to disconfirm fears of social situations.<sup>5</sup>

A model of symptom patterns considered thus far is provided in Figure 2. Negative expectations lead to apprehension and vigilance in social situations. The resulting failure-focused attention makes adequate social performance more difficult and helps ensure that negative social cues will be noticed. Even though these negative social cues may be subtle-initial anxiety, a mispronounced word, an awkward pause in a conversation-amplifying cognitions inflate their importance, occasioning more extreme emotional reactions. Increasing anxiety symptoms may further hamper performance and enhance interpretations of social failure. Consequent escape and avoidance may lock in memories of the perceived poor outcome and prevent the disconfirmation of negative expectations. With enough avoidance, the acquisition or maintenance of social skills may be hampered, leading to additional negative expectations and performance limitations. In addition, depression, when present, can serve to intensify negative cognitions and expectations of negative social evaluations.<sup>6</sup>

All of these patterns differ markedly from those of individuals without social anxiety. In these individuals, social performance is not linked with negative affect and dysfunctional expectancies. Attention is directed to social cues; if autonomic arousal is increased, so is the efficiency of the attention to these cues.<sup>2,7</sup> The result is an adequate, nonaversive social performance.

## **COGNITIVE-BEHAVIORAL INTERVENTIONS**

The clinical value of a cognitive-behavioral model of social anxiety disorder lies in its ability to elucidate targets for intervention. Accordingly, the goal of treatment of social anxiety disorder can be translated into the goal of eliminating specific patterns that engender and maintain social anxiety. Based on the model presented above, cognitive-behavioral treatments for social anxiety disorder need to (1) correct dysfunctional thoughts that create apprehension and anxiety, (2) correct core amplifying cognitions, (3) modify failure-focused attention, (4) decrease avoidance and safety behaviors, and (5) increase exposure to and accurate evaluation of performance and outcome in social situations.

Current cognitive-behavioral treatment packages differ in their relative emphasis on specific treatment elements, but commonly include information, cognitive restructuring, and exposure interventions that are combined, at times, with social skills training and anxiety management interventions. Information is designed to provide the patient with a model of the disorder, aid the patient in understanding the role of the treatment interventions to follow, and enlist active participation in a collaborative treatment effort. Discussion of self-perpetuating cycles of dysfunctional cognitions, anxiety, and avoidance are emphasized, and the patient is provided with initial practice in conceptualizing his or her anxiety experience in terms of component elements.

Informational interventions also provide a natural segue into cognitive-restructuring interventions in which patients are taught to identify and challenge specific negative and dysfunctional thoughts, as well as general cognitive errors including emotional reasoning (because I feel bad, I must be performing poorly) and perfectionistic or all-or-none thinking (a less-than-perfect performance is a failed performance). In treatment, thoughts are regarded as hypotheses, and emphasis is placed on the development of more accurate thinking patterns using Socratic discussions; self-monitoring of cognitions before, during, and after anxiety episodes; and "behavioral experiments" to test the validity of specific beliefs. Relative to the model of social anxiety disorder presented above, cognitive restructuring provides a means of challenging and reducing the negative expectations and self-defeating amplifying cognitions associated with social anxiety disorder. This process is aided by monitoring thoughts during naturally occurring anxiety episodes and by practicing cognitive restructuring during exposure procedures.

The role of exposure interventions is to help patients enter social situations and allow fear to dissipate by staying and performing adequately in these situations. Expo-

sure also provides patients with an opportunity to develop alternative cognitive skills in the context in which these skills are most needed. In turn, cognitive restructuring may be used to enhance exposure effects by helping patients better direct their attention and cognitive abilities toward relevant cues rather than anxiogenic thoughts. As a consequence, exposure provides a context for correcting dysfunctional thoughts, redirecting failure-focused attention, and eliminating safety behaviors. Furthermore, construction of clear behavioral goals for exposure and review of objective goal attainment provide a context for challenging dysfunctional, subjective evaluations of performance. In particular, with repeated exposure, patients learn that they tend to meet objective performance goals despite their subjective experience of anxiety. As confidence increases with subsequent exposures, negative expectations and evocation of anxiety in social situations are further reduced. Successful exposure breeds positive memories and adaptive expectations for future performances.

Wells et al.5 have suggested some guidelines for maximizing the effectiveness of exposure relative to safety behaviors in social anxiety disorder. These guidelines include assessing patients' feared catastrophes and the likelihood that these catastrophes will occur, identifying safety behaviors that are rationally linked to the feared catastrophes, establishing a cognitive set focusing on active disconfirmation of negative beliefs, eliminating or reversing safety behaviors during exposure, and discussing the outcome of the assignment in information-processing terms. The therapist should ask specifically whether the feared catastrophe occurred. If it did not occur, the therapist should ask for the patient's explanation and assess whether the nonoccurrence was attributed only to residual safety behavior or whether the exercise produced a more profound change in belief. These procedures are designed to minimize the influence of behaviors and beliefs that may insulate patients from corrective feedback.

An impressive body of research supports the efficacy of exposure and cognitive-restructuring interventions in the treatment of social anxiety disorder. The available evidence suggests that exposure interventions yield more favorable results than cognitive restructuring, and there is inconsistent evidence suggesting that the combination of these interventions is superior to exposure alone,<sup>8–11</sup>

Although informational, exposure, and cognitiverestructuring interventions form the core of many current cognitive-behavioral treatment approaches to social anxiety disorder, other interventions are also applied to the disorder. Social skills training, including instruction, modeling by the therapist, and practice by the patient with corrective feedback, is aimed most prominently at enhancing social competence rather than decreasing social anxiety. Indeed, there is evidence that social skill interventions are most useful for individuals with actual skill deficits and may be less useful for individuals with competent skills but high levels of anxiety in social situations.<sup>12</sup> However, elements of exposure are inherent in social skills training, and hence exposure elements can easily be maximized depending on how skill training and independent practice are conducted and assigned. Such factors may influence diverging evaluations of the effectiveness of social skills interventions (compare references 10 and 11). Finally, there is only limited evidence for the usefulness of relaxation procedures alone for social anxiety,<sup>10</sup> although at times they may be applied as an adjunct to other interventions.

Successful cognitive-behavioral treatment packages for social anxiety disorder have been developed in recent years. One notable package is Heimberg's cognitivebehavioral group therapy (CBGT) for social anxiety disorder.<sup>13,14</sup> This program combines stepwise exposure and cognitive-restructuring interventions. In initial sessions, patients are provided with a wealth of information on the nature of anxiety conditions and self-perpetuating cycles between anxiogenic cognitions, anxiety responses, and avoidance behaviors. Patients are taught to identify their cognitive distortions in social situations and the logical flaws in their thinking. Patients are then introduced to stepwise exposure with practice in the group setting. That is, the group provides an audience for exposure and rehearsals in role-play situations. Home exposure and cognitive restructuring is then assigned after each session for a total of 12 sessions of treatment. In empirical studies, this treatment has been shown to be significantly more effective than supportive group treatment for social anxiety disorder and has been shown to maintain gains over follow-up intervals.<sup>13</sup> In particular, this treatment is associated with further gains in efficacy over long-term follow-up, suggesting that patients learn an approach for managing their anxiety that is continued after formal treatment ends.15,16

### RELATIVE EFFICACY OF CBT AND PHARMACOTHERAPY FOR SOCIAL ANXIETY DISORDER

The available evidence suggests that patients with social anxiety disorder can improve significantly with either CBT or pharmacotherapy. However, is one treatment consistently superior to the other? Recently, Gould et al.<sup>9</sup> completed a meta-analysis of all available controlled-outcome studies conducted between 1974 and 1995 (24 studies, 1079 subjects). Effect sizes were computed to represent the advantage of active treatment over the control condition. Based on review of 17 treatment comparisons, the overall effect size for CBT was 0.74, with the highest effect sizes for exposure with or without cognitive restructuring (0.85). The overall effect size for pharmacotherapy was 0.62, with the highest contributing effect sizes from 2 studies of selective serotonin reuptake inhibitors (SSRIs) (1.89) and 2 studies of benzodiazepines (0.72), although the small number of studies greatly limited confidence in these individual estimates. Monoamine oxidase inhibitors (MAOIs) were found to have an average effect size of 0.64. Comparisons of the overall effect sizes for pharmacotherapy and CBT revealed no significant differences, and the authors concluded that the available evidence suggested approximately equal efficacy for these interventions. Likewise, analysis of dropout rates for each treatment modality (approximately 10% for CBT and 14% for pharmacotherapy) indicated approximately equal tolerability for these treatments.<sup>9</sup>

The conclusion that pharmacotherapy and CBT offer approximately equal outcomes is also supported by individual treatment studies. For example, early results from a large, multicenter examination of the relative efficacy of phenelzine and CBGT suggested equivalent response rates that were both superior to placebo conditions.<sup>17</sup> Although phenelzine tended to have a faster onset of action and better outcome on select variables, CBGT tended to be associated with maintenance of treatment gains.

Similar results were obtained in a recent study of the relative efficacy of CBGT and clonazepam.<sup>18</sup> Clonazepam was selected as the pharmacologic agent because of the strong effect size for benzodiazepines in the meta-analysis conducted by Gould et al.9 Again, patients in both treatment arms improved significantly, and no differences between groups were evident in the intent-to-treat analysis. However, an evaluation of study completers indicated an advantage for clonazepam at the week 12 assessment only. Notably, patients in the clonazepam treatment group were encouraged to enter previously avoided social situations. This encouragement may have increased treatment gains in the clonazepam group, but also provided a more clinically realistic comparison condition for examining the relative efficacy of CBGT. The combination of CBT with medication is a recommended strategy among psychopharmacologists. For example, Sutherland and Davidson<sup>19</sup> recommend that pharmacotherapy for social anxiety disorder be given in the context of a supportive and educational environment that emphasizes self-directed in vivo exposure.

The study conducted by Otto et al.<sup>18</sup> was also notable for investigating differential predictors of treatment outcome. A range of severity and cognitive variables were evaluated, but no consistent evidence was obtained for differential prediction of outcome. Negative predictors of response to one treatment modality also tended to predict poorer response to the other treatment modality. In summary, these authors found that patients randomly assigned to CBGT or clonazepam were equally likely to respond to treatment, and baseline measures of symptom severity and diagnostic subtype provided no guidance for the selection of one treatment over another.

The limited evidence for the superiority of pharmacotherapy on select measures or at select assessment points is offset by the encouraging evidence for strong maintenance of treatment gains with CBT. The meta-analysis conducted by Gould et al.9 indicated that, on average, treatment gains were maintained or extended following short-term CBT. Few studies are available that evaluated longer term outcomes of pharmacotherapy for treatment of social anxiety disorder, but the available evidence suggests that symptoms return following medication discontinuation and that maintenance pharmacotherapy or additional treatment is common among patients who initiated medication treatment for social anxiety disorder.<sup>20,21</sup> On the basis of these considerations, Gould et al.9 completed cost projections for each treatment modality. This analysis indicated that group CBT for social anxiety disorder may offer a superior and more cost-effective outcome compared with individual CBT and that it is an especially costeffective intervention relative to ongoing medication treatment (see also reference 22).

## **FUTURE DIRECTIONS**

The success of exposure and cognitive restructuring encourages further application and refinement of these interventions for social anxiety disorder. These treatments focus directly on correction of dysfunctional cognitions and failure-focused attention and reduction of social avoidance and use of safety behaviors while aiding rehearsal of more accurate evaluations of performance and outcome in social situations. However, these interventions may only indirectly target catastrophic interpretation of the meaning of anxiety symptoms. These symptoms are direct cues for feelings of failure, shame, and increased anxiety for many patients. Social exposure interventions target these cognitions indirectly by providing a format for patients to compare objective and subjective performance. Patients, by observing their actual performance, may learn that the subjective experience of anxiety does not characterize actual objective performance.

An alternative strategy is to directly expose patients to anxiety-like sensations using interoceptive exposure techniques. These techniques, which use a variety of exercises to induce these sensations in an exposure format, are a core feature of current CBT strategies for panic disorder.<sup>7,23</sup> It was recently suggested that these procedures may be useful for patients with social anxiety disorder who experience panic attacks upon social exposure.<sup>24</sup> In addition, they may be useful for reducing shame-based interpretations of anxiety sensations. In short, interoceptive exposure procedures can be used to provide a format for rehearsing alternative cognitive and emotional responses to anxiety sensations prior to social exposure assignments. With alternative responses to anxiety in place, patients may be better able to learn from in vivo exposure procedures. These ideas await empirical validation.

The role of combined pharmacologic and cognitivebehavioral treatment strategies also awaits empirical vali-

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dation. Does the combination of these modalities of treatment offer additive efficacy? Certainly, it is recommended clinical practice to provide patients with information and self-directed exposure assignments in the context of standard pharmacotherapy.<sup>19</sup> There is not, however, information about the long-term benefits of adding brief or ongoing pharmacotherapy to more complete CBT treatment packages.

Given the evidence that cognitive-behavioral interventions may offer long-term maintenance of treatment gains,<sup>9,16,25</sup> CBT emerges as a potential strategy to aid medication discontinuation in patients with social anxiety disorder. There is consistent evidence that brief CBT may aid medication discontinuation, particularly benzodiazepine discontinuation, in patients with panic disorder.<sup>26-28</sup> Similar benefits may emerge in patients who, in the context of CBT, wish to discontinue pharmacotherapy for social anxiety disorder. Again, these hypotheses await empirical validation.

#### CONCLUSION

In summary, CBT offers an effective treatment option for patients with social anxiety disorder and is associated with maintenance or extension of treatment gains over time. Examination of the efficacy of CBT relative to pharmacotherapy suggests that there are few significant differences at the end of acute treatment, although pharmacotherapy is assumed to require ongoing treatment to maintain clinical benefits. Further study is needed to determine the efficacy of combined treatment strategies and the use of CBT to aid medication discontinuation without relapse in patients with social anxiety disorder. Although outcome studies indicate that either CBT or pharmacotherapy can effectively treat social anxiety disorder, partial response and nonresponse to treatment are all too common. More effective cognitive-behavioral strategies need to be developed. Greater therapeutic attention to dysfunctional responses to anxious affect, perhaps utilizing interoceptive exposure techniques for treatment, may offer additional benefit for select patients with social anxiety disorder.

Drug names: clonazepam (Klonopin), phenelzine (Nardil).

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