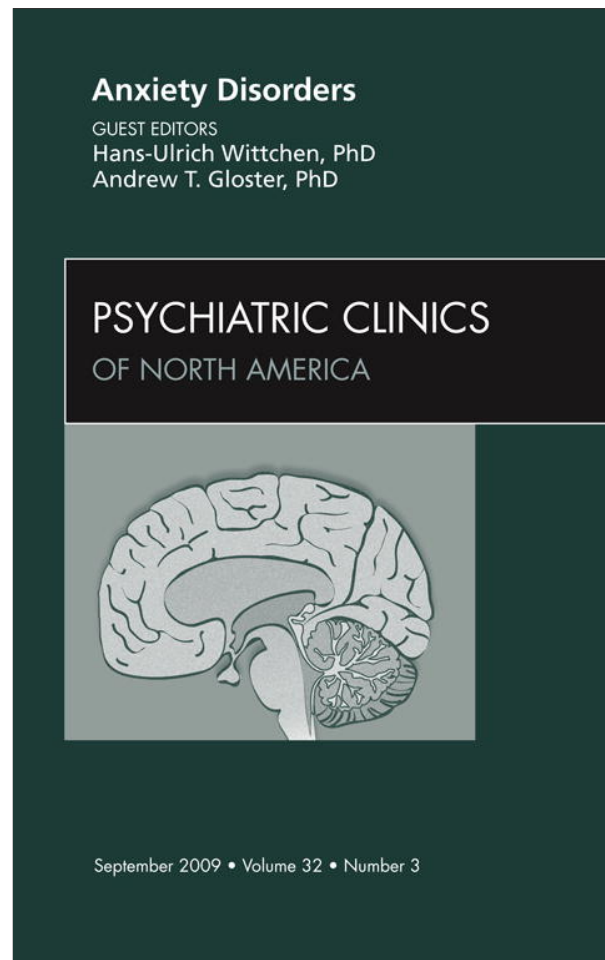


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Social Phobia: An Update on Treatment

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KEYWORDS

- Social phobia • Social anxiety disorder
- Cognitive-behavioral treatment • Pharmacotherapy
- Efficacy • Effectiveness

SOCIAL PHOBIA

Social phobia, also known as social anxiety disorder, is a commonly occurring anxiety disorder^{1,2} characterized by a fear of being embarrassed or humiliated by one's own behavior or anxiety symptoms in social or performance situations that may involve scrutiny by others.³ People who have social phobia may experience anxiety in one or a few specific situations (eg, speaking in public, taking tests), or they may experience anxiety in most social or performance situations they encounter (the latter is referred to as the generalized subtype of social phobia).⁴ As a result of their anxiety, they may suffer impairment in several life domains such as social functioning, educational attainment, and vocational productivity, and they are at increased risk for mood and substance use disorders as well (eg,⁵⁻⁷).

EVIDENCE FOR THE EFFICACY OF TREATMENTS FOR SOCIAL PHOBIA

Recent years have seen an increasing number of randomized, controlled trials (RCTs) and meta-analyses of the pharmacological and psychological treatment of social phobia. These studies have provided researchers and clinicians with evidence of treatment efficacy, which will now be considered. It should be noted that most RCTs, for social phobia or any other disorder, implement specific inclusion and exclusion criteria that may render the study population different from patients encountered in the clinician's office. In studies of pharmacotherapy, the most frequent exclusions are of (1) patients who have a comorbid diagnosis of major depressive disorder, because it is important to determine that medications used to treat social phobia are not simply demonstrating an antidepressant effect, and (2) patients who have comorbid alcohol or substance use disorders, who are likely to be noncompliant with treatment or whose uncontrolled use of alcohol or substances may make it difficult or dangerous

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for them to participate in medication studies. In all RCTs, patients must be willing to accept randomly determined assignment to the experimental treatment or to a placebo or other control condition.

Pharmacotherapy

Two classes of drugs in particular are considered first-line pharmacological treatments for social phobia because they have demonstrated efficacy in placebo-controlled trials and because their potential side-effect profiles are more benign than those of other available medications. These drugs of choice are selective serotonin-reuptake inhibitors (SSRIs) including fluvoxamine, sertraline, paroxetine, citalopram, escitalopram, and fluoxetine, and the serotonin-norepinephrine reuptake inhibitor (SNRI) venlafaxine.^{8–10} Mixed results in controlled trials have been reported for fluoxetine, however: only one of three studies found it to be superior to placebo.^{11–13}

Benzodiazepines, such as clonazepam and alprazolam, also are used frequently to treat anxiety disorders. The results regarding their efficacy are mixed, however. Clonazepam seems to be an efficacious treatment for social phobia,^{14,15} but in the only placebo-controlled study of alprazolam, it was not superior to placebo.¹⁶ When considering benzodiazepine treatment, clinicians need to be aware that these drugs may be less effective or contraindicated for patients who have comorbid mood disorders. There is also potential for anxiety to return following withdrawal from the medication, although much of this concern may be mitigated with a gradual tapering program.¹⁷ Benzodiazepines have abuse potential and are not recommended for people who have a history of substance use disorders. These drugs also may interfere with exposure to feared situations that often is a part of cognitive behavioral therapy (CBT) for social phobia. Benzodiazepines are known to inhibit the experience of anxiety during exposure to feared situations,¹⁸ and it has been found in the treatment of other anxiety disorders that patients who receive the combination of benzodiazepines and exposure and who attribute their improvement to the medication rather than their own efforts are more likely to relapse (eg,¹⁹).

Monoamine oxidase inhibitors (MAOIs), such as phenelzine sulfate, are among the most efficacious treatments for social phobia.¹¹ Traditional MAOIs are a less-preferred treatment choice, however, because they may cause rapidly intensified blood pressure and increased the risk for heart attack and stroke unless dietary restrictions are followed strictly. Reversible inhibitors of monoamine oxidase-A have not been shown to be an efficacious alternative and are rarely used. Other classes of drugs that have been used to treat social phobia include anticonvulsants (eg, gabapentin) and β -adrenergic blockers (eg, atenolol). Gabapentin seems to be effective only at higher doses.²⁰ β -adrenergic blockers do not seem to be efficacious for social phobia when administered on a regular dosing schedule, but they may have a role in the management of anxiety experienced occasionally in performance situations.

Few studies have compared medications with one another, and the small number of studies limits conclusions. In one study, different doses of escitalopram were compared with paroxetine and placebo. There were no differences between the active treatments after 12 weeks, but after 24 weeks the highest dose of escitalopram (20 mg) generated improved outcomes on measures of social anxiety compared with paroxetine (20 mg²¹). Another study compared venlafaxine and paroxetine. Both were superior to placebo, but neither one was superior to the other.²²

Empirical data also are scarce with respect to the maintenance of gains accomplished with pharmacotherapy. Two double-blind studies^{23,24} have investigated discontinuation of paroxetine and sertraline for social phobia, respectively. Patients

who continued treatment with paroxetine were significantly less likely to relapse than patients who had been switched to placebo.²³ Among patients who had improved with sertraline, those who continued treatment with sertraline were significantly less likely to relapse than those who were switched to placebo or who had continued on placebo because of a response during the treatment phase.²⁴

Psychotherapy

Individual and group cognitive behavioral therapy

CBT is the most studied form of psychotherapy for social phobia. It is described most accurately as a family of techniques derived from the behavioral and cognitive traditions. The largest number of studies has been devoted to the development and evaluation of treatments that combine psychoeducation, in-session and in vivo exposure to feared situations, and techniques intended to modify maladaptive or irrational thinking patterns common among persons who have social phobia (ie, cognitive restructuring). Other techniques commonly included under the CBT umbrella are applied relaxation and social skills training. These techniques have been the focus of fewer trials. In one study, applied relaxation was more efficacious than a waiting-list control but was less efficacious than the combination of psychoeducation, cognitive restructuring, and exposure.²⁵ Social skills training has demonstrated efficacy in uncontrolled trials, but it is not possible to state with confidence that it is sufficient as a stand-alone treatment for social phobia.²⁶ One study compared a CBT package (ie, psychoeducation, cognitive restructuring, and exposure) with an additional social skills training module versus CBT without this module for patients who had generalized social phobia. Both treatments were efficacious, but the combination group demonstrated significantly greater gains.²⁷

Several published meta-analyses have examined CBT for social phobia. Feske and Chambless²⁸ compared exposure plus cognitive restructuring versus exposure-only treatments for social phobia in a meta-analysis of 12 studies with a total of 208 participants. Studies involving only cognitive restructuring were excluded. In this meta-analysis, the two types of CBT were similarly efficacious, but a higher number of exposure sessions was related to better outcome. The most recent meta-analysis²⁹ of CBT for social phobia included 32 RCTs with a pooled total of 1479 participants. Unsurprisingly, the authors found that CBT produced better posttreatment outcomes on a range of measures than wait-list, psychological placebo, or pill placebo. Importantly, the gains from treatment were maintained at follow-up. The authors also investigated whether the type of treatment (ie, combined exposure and cognitive restructuring, exposure therapy only, cognitive restructuring only), the mode of delivery (ie, individual therapy, group therapy), or the number of hours times the number of sessions in treatment (ie, dose-response relationship) affected treatment outcome, but none did. Other factors that were not included in the meta-analysis may affect treatment outcome (eg, severity of social phobia symptoms or impairment, comorbidity, other treatment-related variables).

There may be numerous reasons for the findings of no difference between the various forms of CBT. For example, the meta-analyses may be based on a small number of trials, may not weight studies according to their quality, or may eliminate studies from the analysis in idiosyncratic fashion. In addition, different control conditions may be associated with different between-group effect sizes, a possibility that is not always taken into consideration. For example, exposure alone has been compared typically to a waiting-list condition. Conversely, exposure combined with cognitive restructuring more often has been compared with more stringent psychological or pill placebo conditions. Thus exposure with cognitive restructuring may artifactually

generate lower mean effect sizes than exposure alone. Although meta-analyses provide a wealth of information in a synthesized manner, there also is important information that usually is not reported because it is not included in the majority of the source articles (eg, information about long-term maintenance of gains accomplished during treatment). Review of individual studies therefore may be helpful, and one set of studies is reviewed briefly here.

Cognitive behavioral group therapy for social phobia (CBGT)³⁰ is a well-investigated protocol that includes psychoeducation, structured cognitive exercises, exposures to simulated anxiety-evoking events in session, cognitive restructuring before, during, and after exposures, and behavioral and cognitive homework assignments. CBGT has been compared with educational-supportive group therapy, a highly credible psychological placebo condition.³¹ Compared with educational-supportive group therapy, CBGT generated significant improvements in clinician ratings of severity, percent responders, and subjective anxiety ratings before and during behavioral performance at posttreatment that were maintained at follow-up assessments both 6 months and 5 years later.³² CBGT and similar treatment packages have been compared with medication treatments, and those studies are reviewed in later sections.

Interpersonal therapy

Interpersonal therapy (IPT) is based on the assumption that psychiatric disorders occur and are maintained within an interpersonal context. IPT is a time-limited 12- to 16-week therapy that is efficacious in the treatment of acute depression,³³ dysthymic disorder,³⁴ and other disorders with an interpersonal component such as binge eating disorder.³⁵ Lipsitz and colleagues³⁶ modified IPT for social phobia. In this treatment, core interpersonal problem areas rather than social interaction and performance situations are identified and then are examined through multiple techniques (eg, exploration of feelings and thoughts related to the problem area, encouragement of affective expression, clarification of feelings, communication and decision analysis, and role playing of target situations but without a focus on exposure).

In the initial, uncontrolled study of IPT for social phobia, seven of nine individuals (78%) were classified as responders,³⁶ but a randomized trial that compared IPT to a supportive therapy control failed to replicate these initial findings.³⁷ Both groups demonstrated improvement in social anxiety, but they did not differ on the majority of measures or in the proportion of responders. Another recent study, however, did provide some support for the efficacy of IPT for social phobia.³⁸ Conducted in an inpatient setting, this study compared 10 weeks of IPT and CBT. Patients in each condition received four group sessions and one individual session per week. Treatments were modified to include individual and group components to fit an inpatient setting better. Both groups demonstrated improvements on measures of social anxiety, and these gains were maintained at 1-year follow-up. Definitive conclusions about the efficacy of IPT for social phobia cannot be made, however, because there were few differences between inpatient IPT and CBT (CBT was superior on a single secondary measure), and no control condition was included.

Psychodynamic therapy

Although no controlled trials of psychodynamic therapy for social phobia have been published, case studies have been presented (eg,³⁹). The rationale for the focus of psychodynamic therapy is found in Gabbard's^{40,41} work. Within this framework, people who have social phobia experience shame because of an unconscious need to be the center of attention, guilt related to an unconscious need to eradicate social

competition, doubt concerning the ability to eradicate social competition, separation anxiety because of an unconscious need for autonomy, and loss of love from a caregiver because of autonomy. Representations of others, particularly caregivers, may have been internalized as critical, shaming, or abandoning. These internalized representations then are projected onto others, bringing about a need to avoid social situations. Recently, a short-term treatment manual has been developed for social phobia based on Luborsky's psychodynamically oriented supportive-expressive therapy.⁴² The treatment includes several elements, such as a focus on the core conflictual relationship theme that influences the patient's primary symptoms, goal setting, enhancing insight, and understanding the role of shame and unrealistic demands. In addition, there is a component similar to exposure in which patients are encouraged to confront feared social situations. This treatment manual currently is being used in a large-scale investigation comparing psychodynamic therapy and CBT for social phobia.

Comparison and Combination of Pharmacotherapy and Cognitive Behavioral Therapy

One of the first meta-analyses to compare CBT and pharmacotherapy for social phobia⁴³ included 24 controlled trials. Both types of treatment were more efficacious than control conditions, and there were no significant differences between them. A later, larger meta-analysis⁴⁴ compared CBT and pharmacotherapy across 108 trials. Benzodiazepines and SSRIs were equally efficacious at posttreatment and were more efficacious than control conditions and applied relaxation. Benzodiazepines (based on a limited number of trials), but not SSRIs, were superior to MAOIs and other forms of CBT at posttreatment. Maintenance of gains could not be examined for pharmacotherapies because of insufficient follow-up data, a recurrent problem in most trials of the efficacy of pharmacotherapy. In another meta-analysis, patients treated with CBT demonstrated additional gains after follow-up periods averaging 3 months.⁴⁵ Additional light may be shed on the relative maintenance of gains in CBT versus pharmacotherapy by examination of individual trials.

CBGT, the MAOI phenelzine, educational-supportive group psychotherapy (ie, an attention-placebo treatment of equal credibility to CBGT), and pill placebo were compared in a trial of 133 patients who participated in 12 weeks of acute treatment, 6 months of maintenance treatment for responders to CBGT and phenelzine, and 6 months of naturalistic follow-up.⁴⁶ More patients responded to CBGT or phenelzine than to the control conditions, and patients treated with phenelzine tended to respond more quickly, after 6 weeks of active treatment, whereas the patients treated with CBGT more often demonstrated treatment response after 12 weeks. After 12 weeks, patients treated with phenelzine surpassed patients treated with CBGT on some dimensional measures, although both were superior to controls. During the maintenance and follow-up phases, however, 50% of phenelzine responders relapsed, compared with only 17% of CBGT responders, suggesting that CBGT provided better protection against relapse than phenelzine.⁴⁷ Another trial that compared CBT and fluoxetine¹² demonstrated the superiority of CBT. CBT continued to outperform fluoxetine between posttreatment and 12-month follow-up. Fluoxetine did not surpass placebo in this trial, however.

Very few trials have examined CBT and pharmacotherapy in combination for social phobia. One recent trial examined the combination of CBGT and phenelzine, in comparison with the monotherapies and pill placebo, in a sample of 128 patients.⁴⁸ After 24 weeks, combined treatment outperformed phenelzine, which was superior to CBGT, which was superior to placebo. Another trial¹¹ compared group CBT to

fluoxetine, the combination of CBT plus fluoxetine, the combination of CBT plus placebo, and placebo alone. All active treatments surpassed placebo after 14 weeks, with no differences among them. Another study examining sertraline, exposure, and combined treatment found all active treatments to be superior to placebo after 12 weeks.⁴⁹ At 24 weeks, active treatments did not differ from each other, but only sertraline (alone or in combination with exposure) was superior to placebo. At 1-year follow-up, however, only patients who received exposure continued to improve, whereas patients who received sertraline alone or combined treatment showed a degree of deterioration.⁵⁰

NEW TREATMENT DEVELOPMENTS

D-Cycloserine

D-cycloserine (DCS), a partial agonist of the *N*-methyl-D-aspartate receptor, has been shown to augment learning and memory, and doses of DCS received shortly after exposure facilitate extinction to feared stimuli in animals. Two double-blind RCTs have examined the use of DCS to augment the exposure treatment of social phobia involving public speaking.^{51,52} The results of the trials are promising. Short-term dosing of DCS was found to be more effective than placebo in enhancing the effect of exposures. Patients who received DCS before exposures reported less social anxiety than patients who received placebo.⁵² Patients who received DCS also reported improvement in their perception of their speech performance and were rated as more improved on the Global Assessment of Functioning Scale and on a measure of social phobia symptoms.⁵¹

Motivational Interviewing

Although CBT has substantial empirical support for the treatment of social phobia, a number of people do not respond adequately or drop out of treatment prematurely. It has been suggested that the people who fail to benefit from CBT may be ambivalent about change.⁵³ Westra and Dozois⁵³ hypothesized that it would be possible to increase compliance and decrease the risk of drop-out with a pretreatment intervention framed around motivational interviewing, which has been defined (p. 25) as “a client-centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence.”⁵⁴ The therapist helps the client explore his or her thoughts and feelings regarding change to enhance motivation for change. The client then becomes an advocate for his or her own change. This process differs from traditional CBT in which the therapist often assumes more of a leadership role. Fifty-five clients who had a variety of anxiety disorders (about one third of whom had social phobia) were assigned randomly to receive three weekly sessions of motivational interviewing or no intervention before CBT for their anxiety disorder, and the impact of CBT on homework compliance, treatment completion, and symptom change then was examined. Following CBT, the group who received pretreatment motivational interviewing reported significantly higher expectancies for anxiety control and was more compliant with homework assignments than the group that received no pretreatment intervention. Both groups exhibited significant symptomatic improvements, but clients in the motivational interviewing group were more likely to be classified as responders. There were improvements in the group that received CBT without pretreatment intervention, and both groups maintained their gains at follow-up, but motivational interviewing showed promise for increasing compliance and treatment response among potentially difficult clients.

Mindfulness/Meditation-Based Stress Reduction

Mindfulness and meditation originated in Eastern cultures centuries ago, but they have been incorporated increasingly into Western psychotherapeutic practice. Mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment”⁵⁵ (p. 145). Meditation-based stress reduction has demonstrated efficacy in improving the well-being of patients who have medical disorders with or without a comorbid anxiety disorder and in reducing the stress of healthy people.^{56,57} One recent randomized trial⁵⁸ compared eight weekly group sessions in meditation-based stress reduction and a full-day meditation retreat versus 12 weekly sessions of CBGT for social phobia. There were improvements in both groups on measures of depression, disability, and quality of life. Those who had received CBGT, however, demonstrated greater reductions on clinician- and patient-rated measures of social anxiety, and CBGT had a better response rate (66%) than meditation-based stress reduction (38.5%) in the intent-to-treat sample. Although the evidence suggests that CBGT is more efficacious than meditation-based stress reduction across the spectrum of symptoms of social phobia, meditation-based stress reduction also was an efficacious treatment for social phobia. Thus, meditation-based stress reduction may be helpful to some patients who have social phobia. Future research should examine whether there are specific patients who may be more likely to benefit from meditation-based stress reduction than CBT. Furthermore, it may be helpful to integrate mindfulness and meditation techniques into CBT for social phobia, because promising results have been demonstrated for other anxiety disorders (eg,⁵⁹).

Acceptance and Commitment Therapy

Acceptance and commitment therapy (ACT) recently has been applied to the treatment of social phobia with promising results in two uncontrolled trials.^{60,61} Dalrymple and Herbert⁶⁰ investigated the efficacy of a 12-week treatment integrating exposure therapy and ACT. Several measures were administered to assess social anxiety symptoms, experiential avoidance (ie, the attempt to alter the form, frequency, or situational sensitivity of private events even when doing so causes behavioral harm⁶²), and general quality of life. Nineteen participants received 12 weekly 1-hour sessions that included presentation of the four main components of ACT. The first stage (sessions 1 and 2) involved “creative helplessness” in which participants come to understand the futility of their past efforts to control anxiety. The next phase (starting with session 3) presented the concept of “willingness” to have unwanted or distressing thoughts while being exposed to difficult social situations. Mindfulness techniques were presented in the third stage (beginning in session 4) to help teach nonjudgmental experience and appraisal of anxious thoughts and to move toward cognitive defusion, the exercise of distancing the self from internal experiences. The final stage (beginning in session 7) facilitated participation in experiences that reflect the participant’s valued choices. These ACT concepts were demonstrated using metaphors and experiential exercises. The treatment also incorporated traditional behavior therapy techniques such as in-session role-plays, in vivo exposure, and social skills training. Patients displayed significant decreases in social anxiety, fear of negative evaluation, experiential avoidance, and a significant increase in quality of life at posttreatment and 3-month follow-up. A mid-treatment decrease in experiential avoidance predicted a posttreatment decrease in anxiety. Similar results were reported in a small uncontrolled trial of ACT-based group therapy.⁶¹

EVIDENCE FOR ACTIVE INGREDIENTS AND MECHANISMS

Brain Regions Active in Social Phobia and Response to Treatment

Recent studies using neuroimaging techniques such as functional MRI or positron emission tomography have started to identify various brain regions related to social phobia and the action of pharmacotherapy and CBT. One study⁶³ demonstrated that patients who had generalized social phobia showed greater activity in the amygdala, uncus, and parahippocampal gyrus than healthy controls in response to angry and contemptuous faces. An RCT⁶⁴ examined sites of action in the brain of social phobic patients who received the SSRI citalopram, CBGT, or wait-list for 9 weeks. Imaging of regional cerebral blood flow was assessed using positron emission tomography with oxygen 15-labeled water pre- and posttreatment or the wait-list period. Significant improvements were found in both treatment groups. Sites of action were observed, particularly in the right hemisphere, in the amygdala, hippocampus, and adjacent brain regions involved in defensive reactions to threat (ie, periamygdaloid, rhinal, and parahippocampal cortices). Blood flow to the identified regions was reduced significantly in patients in either treatment group who had been classified as responders. It is noteworthy that both citalopram and CBGT may cause changes in the activation of brain regions known to be associated with response to threatening stimuli. The mechanisms involved in these changes have not yet been explored.

Mediators of Change

Little is known about mediators of change in CBT in social phobia. Hofmann⁶⁵ hypothesized that negative cognitive appraisal (estimated social costs, or how bad negative social outcomes are perceived to be), perceived self-efficacy (perceived social skill), and perceived emotional control may be important mediators of change, but few studies actually have tested these hypotheses. In a study comparing group CBT, exposure group therapy, and wait-list control conditions, Hofmann⁶⁶ examined whether changes in estimated social cost mediated pretreatment to posttreatment changes in both active treatment groups. Only the group receiving group CBT showed continued improvement from posttreatment to the 6-month follow-up. Continued benefit was associated with an overall reduction in estimated social cost, suggesting that the cognitive behavioral intervention was associated with greater treatment gains that are mediated through changes in estimated social cost.

Moscovitch and colleagues⁶⁷ examined a different mediational pathway, namely whether changes in social anxiety mediated changes in depression among socially anxious patients who had depressed mood. Changes in depression were fully mediated by changes in social anxiety (accounting for 91% of the variance in depression scores), whereas changes in social anxiety were only partially mediated by changes in depression (accounting for only 6% of the variance in social anxiety scores). These findings suggest that, in this group of patients, improvements in the symptoms of depression tend to track improvements in the symptoms of social anxiety.

Predictors of Treatment Outcome

Treatment-related predictors of outcome also may be important active ingredients in CBT for social phobia. Several studies have examined the importance of homework compliance for treatment outcome. One study⁶⁸ found that more compliant patients reported less fear of negative evaluation posttreatment. Gains also were maintained at 6-month follow-up when patients reported less anxiety during a speech. Another study⁶⁹ also found homework compliance in CBGT to be important. Overall, greater compliance with homework significantly predicted reductions in social anxiety after

pretreatment levels had been controlled. Additional results specific to phases of treatment were reported also. Greater compliance with homework actually was associated with higher levels of anxiety and fear of negative evaluation during the second phase of treatment, when in-session exposures were introduced. During the third phase of treatment, however, when in-session exposures were continued and in vivo exposures were introduced, greater homework compliance was related to reductions in anxiety. One other study⁷⁰ did not find evidence for a relationship between homework compliance and treatment outcome.

Recently, the therapeutic alliance has been considered as a predictor of outcome in CBT for social phobia, again with mixed results. Woody and Adessky⁷⁰ did not find the alliance to be a predictor of treatment outcome. A more recent study⁷¹ examined the relationship between working alliance, session helpfulness, and measures of emotional processing in 18 clients undergoing CBT for social phobia. There was a positive correlation between client-rated working alliance and session helpfulness. Overall, a strong alliance was associated with clients engaging with the session and finding the session helpful. A moderate alliance, however, was most productive when the measure was the amount of anxiety reduction experienced during in-session exposures to feared situations. Speculatively, an alliance that is too weak may not provide a sufficient sense of safety for some patients, whereas a very strong alliance may suppress patients' anxiety experience and indirectly interfere with their ability to overcome it.

Expectancies about treatment have been considered an important factor in the treatment of several mental health problems. Studies examining this potential predictor have generated consistent results. In one study,⁷² a treatment expectancy questionnaire was administered after the first and fourth sessions of CBGT. Expectancy ratings significantly predicted outcome as measured by various interviewer-administered and self-report measures of social anxiety, even after accounting for pretreatment severity. A second study⁷³ also found expectancy to be significantly correlated with a composite anxiety outcome measure at the posttreatment assessment. Expectancy also was a predictor of outcome at the follow-up assessment.

Another treatment-related predictor of CBT outcome to consider is group cohesion. Group cohesion was studied first by Woody and Adessky,⁷⁰ who did not find an effect. Another study,⁷⁴ however, found that better group cohesion ratings across sessions were related to better outcome. It is important to note that group cohesion was not measured until the midpoint of treatment, and it is possible that patient improvements predicted greater cohesion rather than the other way around. Finally, group participation in sessions was examined in one study.⁶⁸ Patients who had been rated by observers as engaging in high group participation were rated as more skillful in the delivery of speeches at 6-month follow-up.

ELEMENTS OF SOCIAL PHOBIA SIMILAR TO ELEMENTS OF OTHER DISORDERS

Several anxiety disorders and other disorders have elements similar to social phobia. Patients who have social phobia demonstrate many of the cognitive characteristics of patients who have other anxiety disorders, for example, biased interpretation of neutral or mildly negative cues as catastrophic,⁷⁵ hypervigilance for threat cues and avoidance of feared stimuli (for a review see⁷⁶), and (although the evidence is somewhat equivocal) biased memory for anxiety-evoking events.⁷⁷ Additionally, individuals who have social phobia are known to engage in post-event processing,⁷⁸ which involves brooding over selectively retrieved negative information about oneself and others from a previously experienced social situation. This process may appear similar

to worrying in generalized anxiety disorder or rumination in depression, but these cognitive styles focus on possible future events and on the consequences of stressful life events in general, respectively (eg, ^{79,80}).

Social phobia is similar to depression on a number of other dimensions. Whereas all of the anxiety disorders have a high level of negative affect, only social phobia is similar to depression in its association with low levels of positive affect.^{81,82} This association is especially robust when considering social interaction anxiety,⁸³ a finding that may stem from the relationship between positive affect and interpersonal engagement⁸⁴ that typically is impaired in both depressed and socially anxious individuals.⁸² Individuals who have social phobia, like individuals who have depression, also have demonstrated diminished positive experiences and curiosity.⁸⁵ Depressive disorders often are comorbid with social phobia, and it is curious that when depression co-occurs with social phobia, the hypervigilance for social threat noted earlier seems to be suppressed.^{86,87}

The effects of comorbid anxiety and mood disorders on the efficacy of CBT for social phobia have been investigated. In one study,⁸⁸ individuals who had social phobia alone were compared with those who had comorbid anxiety disorders and those who had comorbid mood disorders. Patients who had comorbid mood disorders tended to have more severe symptoms both before and following 12 weeks of CBGT. Those who had comorbid anxiety disorders fared as well as those who had social phobia alone. This pattern remained evident at 1-year follow-up. In another study, higher self-reported depression at pretreatment was related to decreased reduction in anxious anticipation of a behavioral test, although this same pattern was not found for clinician ratings of depression.⁷³ In a recent placebo-controlled study, higher levels of depressive symptoms were related to more severe social anxiety and less change in social anxiety symptoms. Individuals who had greater depressive symptoms also were more likely to terminate treatment prematurely.⁸⁹ One additional study⁹⁰ found that socially anxious individuals who had comorbid depression attained the same treatment gains as individuals who had no comorbid disorders or those who had comorbid anxiety disorders (similar to⁸⁸). After a 1-year follow-up period, however, individuals who had comorbid depression showed greater social anxiety than the other participants in the study. Collectively, these studies suggest that individuals who have comorbid depression may benefit from inclusion of a depression-specific component of treatment (eg, use of behavioral activation strategies⁹¹), additional monitoring and/or booster treatments after the acute course of treatment is concluded, or combining CBT for social phobia with antidepressant medication.

Avoidant personality disorder occurs as a comorbid diagnosis in 22.1% to 70% of people who have a primary diagnosis of social phobia.⁹²⁻⁹⁵ It is diagnosed more commonly among patients who have generalized social phobia than among those who have the non-generalized subtype,⁹⁶ suggesting that avoidant personality disorder may be diagnosed more frequently among those who have more severe social phobia. In fact, avoidant personality disorder may best be considered as part of the continuum of severity of social phobia,⁹³ and this assertion is supported by two recent studies.^{97,98} There is disagreement, however, as to whether the presence of avoidant personality disorder adversely affects the outcome of CBT for social phobia: some studies showed little effect,^{98,99} and at least one other showed poorer outcome.¹⁰⁰ Persons who have avoidant personality disorder may avoid intense positive and negative emotions as well as experiencing a broad fear of new situations,¹⁰¹ and these tendencies may suggest additional targets for future treatment research.

FUTURE EFFORTS TO IMPROVE TREATMENTS FOR SOCIAL PHOBIA***Integration of New Treatment Developments into Current Approaches to Cognitive Behavioral Therapy***

The recent years have seen an increased interest in transdiagnostic approaches to the treatment of anxiety disorder.¹⁰² Transdiagnostic models of emotional disorders (including anxiety and mood disorders) theorize that there is a common underlying core pathological construct that maintains the disorders, and recently negative affect has been proposed as a candidate construct.¹⁰³ Persons who have high negative affect may experience several learning situations that result in various types of fears or other emotional states that subsequently are seen as comorbid. A quantitative review¹⁰³ of the available transdiagnostic protocols found large effect sizes of pre- to posttreatment change that were comparable to effect sizes of CBT for social phobia.^{28,29} Gains also were maintained through follow-up of up to 6 months. These types of treatments seem promising, and it may be feasible to transport them to community and private practice settings because the treatment protocols may be used with a range of anxiety disorders. More research is needed to gain understanding of the optimal transdiagnostic treatment approach, however, because there are differences between transdiagnostic treatment protocols. Additionally, all transdiagnostic treatment protocols reviewed were compared either with a wait-list control or with no control group at all. Thus far, none of the protocols have been compared with each other or with CBT for specific anxiety disorders. Therefore the efficacy of individual transdiagnostic treatment protocols relative to each other and to established treatment protocols for specific anxiety disorders is unknown.

Motivational Interviewing and Cognitive Behavioral Therapy for Social Phobia with Comorbid Alcohol or Substance Use Disorders

The rate of comorbid alcohol use disorders among patients who have social phobia is high,¹⁰⁴ but treatment studies targeting this specific population are scarce, and these patients are excluded from many controlled trials of both CBT and medications. One pilot case study¹⁰⁵ of a 33-year-old Caucasian man who had comorbid generalized social anxiety disorder and alcohol abuse examined the effectiveness of conducting motivational interviewing directed at drinking behavior (three sessions) before commencing CBT for social phobia (16 sessions). Motivational interviewing and CBT reduced both alcohol-related problems and social anxiety. The first three sessions focused on the relationship between alcohol use and social anxiety. The patient reported he was stuck in a cycle of using alcohol to cope with anxiety brought on by social situations. In turn, his alcohol use subsequently increased his anxiety in later social situations. Motivational interviewing helped the patient contemplate changing his alcohol-use behaviors. After the patient reported not consuming alcohol during a social event, something that was less challenging than he imagined, daily monitoring of alcohol use was initiated. The patient set a goal of not drinking primarily to manage social anxiety. Alcohol-use behaviors were monitored throughout CBT and were reviewed with regards to his treatment goal. A few sessions into exposures, the patient suggested conducting a “no drinking” social anxiety exposure. The exposure was successful, and additional “no drinking” exposures were conducted. The patient reported that he did not use alcohol to manage anxiety in social situations between the first “no drinking” exposure and the final session. He also reported clinically significant improvement in his fear of negative evaluation. At the final session, positive outcomes also were reported on a measure of change in social anxiety between sessions and a measure of symptoms of alcohol use disorders. The results provided by this pilot

study suggest that CBT and motivational interviewing may be incorporated successfully into treatments for patients who have social phobia and alcohol use disorders. Controlled trials are needed, however.

Situational Panic Attacks

There is little research about situationally bound panic attacks in people who have social phobia. Persons who have social phobia often experience panic attacks that are related to social and/or performance situations. Compared with persons who have social phobia but do not have panic attacks, persons who have social phobia and who experience situationally bound panic attacks have exhibited greater fear and avoidance of social situations. They also have reported more distress and impairment related to their social phobia, higher levels of anxiety sensitivity, and greater hopelessness.¹⁰⁶ Another preliminary study¹⁰⁷ compared the expression of panic symptoms in social situations in patients who had a primary diagnosis of social phobia with that of patients who had a primary diagnosis of generalized anxiety disorder. In addition to the 13 primary symptoms of panic attacks, patients were asked whether they experienced six additional symptoms (ie, blushing, tics/muscle spasms, dry mouth, fear of being unable to speak, fear of their mind going blank, fear of doing or saying something embarrassing) hypothesized to characterize panic attacks in social situations. For the most recent and the worst experience of panic, socially anxious patients endorsed blushing, fear of being unable to speak, fear of their mind going blank, and fear of doing or saying something embarrassing significantly more than did the patients who had generalized anxiety disorder. Similarly, they endorsed experiencing heart palpitations, sweating, shaking, and chills or hot flushes during situationally bound panic attacks more often than did the patients who had generalized anxiety disorder. It appears that individuals who have primary social phobia and who experience panic attacks bound to social anxiety-evoking situations experience a unique set of panic symptoms compared with individuals who have generalized anxiety who experience panic attacks. Clinicians should be alert to the possible presence and configuration of symptoms in these attacks. Consequently, panic attacks may require attention during treatment for social anxiety disorder, and it may be necessary to incorporate procedures directed at panic symptoms (eg, interoceptive exposure, that is, exposure to evoked symptoms of panic) into more traditional CBT approaches to social phobia.

Prevention

Few studies have examined ways of preventing social phobia, but there is strong evidence for familial and environmental influences. Because parents may reinforce the avoidant choices anxious children make,¹⁰⁸ it is important to consider including parents in treatment to provide them with strategies to help their child manage social phobia. Parents who have social phobia may benefit from treatment as well.

Treatment of children and adolescents may prevent chronicity of social phobia because the disorder has an early age of onset, with the highest standardized incidence rates per person-year between 10 and 19 years of age.¹⁰⁹ Promising avenues for prevention may be found in school-based prevention programs or in prevention programs that target children at risk for developing social phobia or other anxiety disorders. Demonstration prevention programs have been integrated into schools to provide children and parents with coping skills (eg, cognitive restructuring, relaxation) and instruction for conducting exposures to feared situations. There was significant improvement in the intervention group compared with children who did not receive the intervention.¹¹⁰ In addition, prevention programs targeting youth at risk of

developing anxiety disorders have been found to reduce anxiety symptoms and rates of anxiety disorders compared with control groups.¹¹¹

What May Be in Store for Social Phobia in the Diagnostic and Statistical Manual of Mental Disorders-V and Are There Implications for Treatment?

The process of revising the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) is well underway, and the DSM-V will be completed in the next few years. These revisions may bring about several changes in the diagnostic criteria for social phobia. Some of the possible changes that may arise from this process are discussed here, with comments regarding how the possible changes may affect clinicians and researchers. What follows is the opinion of the authors and does not reflect the deliberations of any DSM committee or decisions arising there from.

First, the name “social anxiety disorder” was introduced as an alternative to “social phobia” in the DSM-IV, but there is reason to consider social anxiety disorder the better label because it more accurately reflects the severity and pervasiveness of symptoms and impairment associated with the disorder.¹¹² Second, the current exclusion criterion H regarding general medical conditions (ie, if a general medical condition or another mental disorder is present, the fear must be unrelated to it) is highly restrictive. There are several medical conditions that may bring about social anxiety, for example, physically visible congenital or acquired differences, such as cleft lip and palate, port wine stains, effects of surgery following various cancers, or burns. Visible behavioral differences also can result from a medical disorder, as would be the case for stuttering or for tremors related to Parkinson’s disease. It may be more useful to consider revising the current language to allow diagnosis of social phobia (or social anxiety disorder) if the fear is substantially greater than would be expected or normative for persons who have a particular medical condition that produces visible symptoms that may be evaluated by others. A person who will not engage in social interaction for fear of negative evaluation of a physical difference or behavioral symptom may be seriously impaired, and at least one case series¹¹³ suggests that persons in this circumstance do respond to cognitive behavioral and pharmacological treatments for social phobia. Allowing the diagnosis to be applied to these individuals should help reduce their suffering.

The literature suggests that it may make sense to reconsider the current subtyping scheme, which currently describes individuals who fear most social situations as having “generalized” social phobia. Although there are some differences between generalized and non-generalized social phobia (eg, generalized social phobia is associated with greater severity and impairment and is more likely to run in families¹¹⁴), this approach to subtyping is, in effect, a dichotimization of a continuously distributed variable, the number of feared situations.¹¹⁵ In the study by Vriends and colleagues,¹¹⁵ the number of feared social situations was distributed continuously without any clear demarcation between subtypes, and a greater number of feared situations was significantly related to increased functional impairment, comorbidity, treatment seeking, dysfunctional attitudes, and decreased social support and mental health. A specifier indicating the number of feared situations may be a useful means by which to index severity of the disorder in the individual case, but at the present time, the best indication from the available data is that a greater number of feared situations is related to severity, and severity may be related to treatment outcome or the dose of treatment required for a positive outcome. The current dichotomous system has not lived up to its promise.

An additional concern that should be addressed is the relationship between social phobia and avoidant personality disorder. It has been argued, here and

elsewhere,^{96–98} that (1) avoidant personality disorder rarely occurs unless the person diagnosed also meets criteria for generalized social phobia as currently defined, and (2) the criteria for generalized social phobia and avoidant personality disorder are simply too similar and do not described two independent disorders. It seems unwise to give two diagnoses on two different axes to the same set of symptoms.

Finally, it is somewhat curious that for persons over 18 years of age, there is no specification of a minimum duration of symptoms required for a diagnosis of social phobia. For those under 18 years of age, the required duration is 6 months, and it seems reasonable to consider the same duration of symptoms for those who are older.

These are some of the issues that may be considered in the DSM revision process. Of course, any changes will have implications for researchers and clinicians alike. Researchers may find that some criterion changes may restrict the inclusion of participants to their studies (eg, if the duration criteria of 6 months is adopted), whereas changes to other criteria may allow the inclusion of participants who previously were excluded from clinical trials or psychopathology studies (eg, participants who have excessive anxiety about the visible symptoms of medical conditions). Inclusion of previously excluded participant groups could bring about new challenges to empirically supported treatment manuals that were developed in studies that did not address these individuals' specific concerns. Although clinicians working in the community do not have to adhere to the strict boundaries of an empirically supported treatment manual, they also may find that they must be more creative in working with different client groups. In both psychotherapy and pharmacotherapy, many studies have been conducted using samples of persons who have generalized social phobia. Although it is likely that persons who have fewer fears would be responsive to these same treatments, the empirical basis for this assertion is lacking.

What Differentiates Cognitive Behavioral Therapy and Pharmacotherapy for Social Phobia from Treatment for Other Anxiety Disorders?

For pharmacotherapy, the response to the question posed in the heading may be, "Not much." For CBT, the answer is a bit different. The basic form of treatment procedures tend to cut across the anxiety disorders, but the substance and content of the procedures tend to be specific to the anxiety disorder, the initial attempts at transdiagnostic treatments notwithstanding. In fact, Butler^{116,117} first discussed these issues more than 20 years ago, and a complete discussion is beyond the scope of this issue. Social phobia presents significant challenges in CBT, because patients may have made isolationist choices so that their lives include few easily available opportunities for exposure, because they may be too afraid to make big steps (eg, to join a health club or take a class to have an opportunity to talk to another human being), because some social situations occur so quickly that there is little time available to implement cognitive or behavioral coping skills before the situation is over, because social situations do have real consequences that need to be managed or contained, because at least a modicum of skillful social behavior is required and executing skillful social behavior requires attentional capacity that may be devoted to thinking catastrophic thoughts about oneself or the situation, and because the responses of the other person(s) in the situation may be unpredictable or anti-therapeutic.

The reader is referred to manuals for the treatment of social phobia, which address these issues and many others.^{30,118,119}

ROUTINE CARE AND OBSTACLES FOR DISSEMINATION

As previously covered in this article, there is abundant literature providing evidence of the efficacy of pharmacotherapy and CBT for social phobia. The evidence supporting the use of CBT for social phobia, however, usually comes from RCTs conducted in university or other specialty settings in which a structured treatment manual requiring strict adherence is followed, and study participants are carefully screened. Patients who have comorbid major depression, comorbid alcohol or substance abuse or dependence, light to moderate impairment, prior treatment, or who fall outside a certain age range often are excluded.¹²⁰ Thus, it has been argued that patients who receive treatments in non-research settings may not achieve outcomes comparable to the outcomes obtained in a research setting (eg,¹²¹).

Therefore, studies examining the generalizability and transportability of empirically supported treatments for social phobia to outpatient community or private practice settings are needed. Only a small handful of these studies has been conducted, but the results are quite encouraging. The first benchmarking study (ie, a study that compares the effectiveness of a treatment as administered in the community with its efficacy as administered in the laboratory) included 217 patients in four outpatient clinics in Germany.¹²⁰ Patients were unselected, and all had a primary diagnosis of social phobia. There were significant reductions in social anxiety and avoidance 6 weeks following the end of treatment, as well as significant reductions in general anxiety and depression. There were no differences in outcome between the four outpatient clinics. Interestingly, effect sizes were comparable to the average effect sizes reported in published meta-analyses. Another benchmarking study¹²² compared the outcome of CBGT for 58 clients who had social phobia treated in a university research clinic with the outcomes for 54 patients treated in a private practice clinic. There were no significant differences in outcome posttreatment. In addition, both groups maintained their gains 3 months after treatment had been completed. The most recent benchmarking study¹²³ investigated CBGT for 153 clients who had social phobia seen in a community mental health clinic. Again, effect sizes were comparable to those reported in previously published efficacy and effectiveness studies on group and individual treatment for social phobia. Thus far the evidence suggests that CBT for social phobia is transportable to and effective in outpatient, private practice, and community mental health clinics. It will be important for researchers and clinicians in the community to connect to conduct studies of the generalizability and transportability of social phobia treatments to the community as well as to facilitate dissemination of treatment.

SUMMARY

Social phobia is a commonly occurring anxiety disorder. Persons living with this disorder experience interference across various life domains including social life, school, work, or daily activities. The difficulties associated with living with social phobia may cause the person to seek treatment, and both pharmacotherapy and psychotherapy have proved efficacious in clinical trials. The SSRIs and the SNRI venlafaxine are the first-line pharmacological treatments for social phobia. In terms of psychotherapy, CBT is the treatment of choice. There is no conclusive evidence whether pharmacotherapy or CBT is more effective for the treatment of social phobia. The evidence in favor of the combination of pharmacotherapy and CBT is limited as well, but new developments in treatment are taking place. For example, studies are underway to examine the utility of D-cycloserine to enhance exposures in CBT. There also is interest in integrating motivational interviewing with CBT and in taking

advantage of the recent mindfulness- and acceptance-based approaches. As these recent developments are subjected to further study, it would be valuable to include cost-benefit analyses of long-term outcome and cost effectiveness in trials.

Few studies have investigated the active ingredients and mechanisms of action in treatments for social phobia. Treatment with an SSRI or CBT revealed activity in the amygdala, hippocampus, and adjacent brain regions including the periamygdaloid, rhinal, and parahippocampal cortices. Greater gains in CBT may be mediated through changes in estimated social cost. Further it seems that improvements in symptoms of depression tend to follow improvements in social phobia symptoms among socially phobic patients who have depressed mood. Some evidence suggests that homework compliance, therapeutic alliance, and group cohesion may moderate CBT outcome. Stronger evidence exists for the moderating role of group participation and expectancies about treatment. Social phobia shares common elements with other disorders, and the disorders that seem most relevant often are comorbid with social phobia. Thus, elements of these other disorders may affect the efficacy of treatment and require specific consideration in treatment.

Efforts to improve treatments for social phobia are ongoing. There is interest in streamlining treatments for anxiety disorders in general. Transdiagnostic theory and therapy spanning the anxiety disorders as well as the mood disorders by targeting underlying core pathological processes is an example of this recent development. There also is a pull for developing treatments specific to patients who have social phobia and comorbid alcohol use disorder because this particular comorbid combination is so common. A recent case study integrated motivational interviewing with CBT to successfully treat a patient who had this diagnostic picture, but clinical trials are needed. There also may be a need to incorporate interoceptive exposure into CBT for patients who have social phobia who also experience situationally bound panic attacks. This particular group of patients has exhibited greater fear and avoidance of social situations in addition to reporting more distress and impairment related to their social phobia, higher levels of anxiety sensitivity, and greater hopelessness. They may require additional, different treatment strategies to achieve gains in treatment equivalent to those seen in patients who do not have panic attacks. There also is room for prevention efforts with children and adolescents, an area that has not been well studied. Despite concerns regarding the transportability and generalizability of psychological treatments studied in laboratory settings to community settings and a relative lack of studies investigating this issue, the evidence thus far suggests that CBT for social phobia is transportable to and effective in outpatient, private practice, and community mental health clinics.

REFERENCES

1. Kessler RC, Berglund P, Demler O, et al. Lifetime prevalence and age-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2005;62(6):593–602.
2. Kessler RC, Chiu WT, Demler O, et al. Prevalence, severity, and comorbidity of 12 month DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry* 2005;62(6):617–27.
3. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 4th edition. Washington, DC: American Psychiatric Association; 1994.
4. Heimberg RG, Holt CS, Schneier FR, et al. The issues of subtypes in the diagnosis of social phobia. *J Anxiety Disord* 1993;7(3):249–69.

5. Schneier FR, Heckelman LR, Garfinkel R, et al. Functional impairment in social phobia. *J Clin Psychiatry* 1994;55(8):322–31.
6. Stein MB, Kean YM. Disability and quality of life in social phobia: epidemiologic findings. *Am J Psychiatry* 2000;157(10):1606–13.
7. Wittchen HU, Fuetsch M, Sonntag H, et al. Disability and quality of life in pure and comorbid social phobia: findings from a controlled study. *Eur Psychiatry* 1999;14(3):118–31.
8. Blackmore MA, Erwin BA, Heimberg RG, et al. Social anxiety disorder and specific phobias. In: Gelder M, Andreasen N, Lopez-Ibor J, Geddes J, editors. *The new Oxford textbook of psychiatry*. 2nd edition. London: Oxford University Press; 2009. p. 739–50.
9. Blanco C, Schneier FR, Schmidt A, et al. Pharmacological treatment of social anxiety disorder: a meta-analysis. *Depress Anxiety* 2003;18(1):29–40.
10. Ledley DR, Heimberg RG. Social anxiety disorder. In: Antony MM, Ledley DR, Heimberg RG, editors. *Improving outcomes and preventing relapse in cognitive-behavioral therapy*. New York: Guilford Press; 2005. p. 38–76.
11. Davidson JR, Foa EB, Huppert JD, et al. Fluoxetine, comprehensive cognitive behavioral therapy, and placebo in generalized social phobia. *Arch Gen Psychiatry* 2004;61(10):1005–13.
12. Clark DM, Ehlers A, McManus F, et al. Cognitive therapy vs. fluoxetine in generalized social phobia: a randomized placebo-controlled trial. *J Consult Clin Psychol* 2003;71(6):1058–67.
13. Kobak KA, Greist JH, Jefferson JW, et al. Fluoxetine in social phobia: a double-blind, placebo-controlled pilot study. *J Clin Psychopharmacol* 2002;22(3):257–62.
14. Davidson JRT, Potts N, Richichi E, et al. Treatment of social phobia with clonazepam and placebo. *J Clin Psychopharmacol* 1993;13(6):423–8.
15. Otto MW, Pollack MH, Gould RA, et al. A comparison of the efficacy of clonazepam and cognitive-behavioral group therapy for the treatment of social phobia. *J Anxiety Disord* 2000;14(4):345–58.
16. Gerlernter CS, Uhde TW, Cimboric P, et al. Cognitive-behavioral and pharmacological treatments of social phobia: a controlled study. *Arch Gen Psychiatry* 1991;48(10):938–45.
17. Connor KM, Davidson JRT, Potts NLS, et al. Discontinuation of clonazepam in the treatment of social phobia. *J Clin Psychopharmacol* 1998;18(5):373–8.
18. Sartory G. Benzodiazepines and behavioral treatment of phobic anxiety. *Behavioural Psychotherapy* 1983;11:204–17.
19. Basoglu M, Marks IM, Kilic C, et al. Alprazolam and exposure for panic disorder with agoraphobia: attribution of improvement to medication predicts subsequent relapse. *Br J Psychiatry* 1994;164(5):652–9.
20. Pande AC, Davidson JRT, Jefferson JW, et al. Treatment of social phobia with gabapentin: a placebo-controlled study. *J Clin Psychopharmacol* 1999;19(4):341–8.
21. Lader M, Stender K, Burger V, et al. Efficacy and tolerability of escitalopram in 12- and 24-week treatment of social anxiety disorder: randomized, double-blind, placebo-controlled, fixed-dose study. *Depress Anxiety* 2004;19(4):241–8.
22. Liebowitz MR, Gelenberg AJ, Munjack D. Venlafaxine extended release vs placebo and paroxetine in social anxiety disorder. *Arch Gen Psychiatry* 2005;62(2):190–8.
23. Stein DJ, Versiani M, Hair T, et al. Efficacy of paroxetine for relapse prevention in social anxiety disorder. *Arch Gen Psychiatry* 2002;59(12):1111–8.

24. Walker JR, van Ameringen MA, Swinson R, et al. Prevention of relapse in generalized social phobia: results of a 24-week study in responders to 20 weeks of sertraline treatment. *J Clin Psychopharmacol* 2000;20(6):636–44.
25. Clark DM, Ehlers A, Hackmann A, et al. Cognitive therapy versus exposure and applied relaxation in social phobia: a randomized controlled trial. *J Consult Clin Psychol* 2006;74(3):568–78.
26. Ponniah K, Hollon SD. Empirically supported psychological interventions for social phobia in adults: a qualitative review of randomized controlled trials. *Psychol Med* 2008;38(1):3–14.
27. Herbert JD, Gaudiano BA, Rheingold AA, et al. Social skills training augments the effectiveness of cognitive behavioral group therapy for social anxiety disorder. *Behav Ther* 2005;36(2):125–38.
28. Feske U, Chambless DL. Cognitive behavioral versus exposure only treatment for social phobia: a meta-analysis. *Behav Ther* 1995;26(4):695–720.
29. Powers MB, Sigmarsson SR, Emmelkamp PMG. A meta-analytic review of psychological treatments for social anxiety disorder. *International Journal of Cognitive Therapy* 2008;1(2):94–113.
30. Heimberg RG, Becker RE. *Cognitive behavioral group therapy for social phobia: basic mechanisms and clinical applications*. New York: Guilford Press; 2002.
31. Heimberg RG, Dodge CS, Hope DA, et al. Cognitive-behavioral group treatment for social phobia: comparison to a credible placebo control. *Cognit Ther Res* 1990;14(1):1–23.
32. Heimberg RG, Salzman DG, Holt CS, et al. Cognitive-behavioral group treatment for social phobia: effectiveness at five-year follow-up. *Cognit Ther Res* 1993;17(4):325–39.
33. De Mello MF, de Jesus Mari J, Bacaltchuk J, et al. A systematic review of research findings on the efficacy of interpersonal therapy for depressive disorders. *Eur Arch Psychiatry Clin Neurosci* 2005;255(2):75–82.
34. Markowitz JC. Psychotherapy of dysthymia. *Am J Psychiatry* 1994;151(8):1114–21.
35. Wilfley DE, Welch RR, Stein RI, et al. A randomized comparison of group cognitive behavior therapy and group interpersonal therapy for the treatment of overweight individuals with binge-eating disorder. *Arch Gen Psychiatry* 2002;59(8):713–21.
36. Lipsitz JD, Markowitz JC, Cherry S, et al. Open trial of interpersonal psychotherapy for the treatment of social phobia. *Am J Psychiatry* 1999;156(11):1814–6.
37. Lipsitz JD, Gur M, Vermes D, et al. A randomized trial of interpersonal therapy versus supportive therapy for social anxiety disorder. *Depress Anxiety* 2008;25(6):542–53.
38. Borge FM, Hoffart A, Sexton H, et al. Residential cognitive therapy versus residential interpersonal therapy for social phobia: a randomized clinical trial. *J Anxiety Disord* 2008;22(6):991–1010.
39. Zerbe KJ. Uncharted waters: psychodynamic considerations in the diagnosis and treatment of social phobia. In: Menninger WW, editor. *Fear of humiliation: integrated treatment of social phobia and comorbid conditions*. Northvale (NJ): Jason Aronson; 1997. p. 1–19.
40. Gabbard GO. Psychodynamics of panic disorder and social phobia. *Bull Menninger Clin* 1992;56(2 Suppl A):A3–13.
41. Gabbard GO. *Anxiety disorders in psychodynamic psychiatry in clinical practice*. Washington, DC: American Psychiatric Press; 2005.

42. Leichsenring F, Beutel M, Leibing E. Psychodynamic psychotherapy for social phobia: a treatment based on supportive-expressive therapy. *Bull Menninger Clin* 2007;71(1):56–83.
43. Gould RA, Buckminster S, Pollack MH, et al. Cognitive-behavioral and pharmacological treatment for social phobia: a meta-analysis. *Clinical Psychology: Science and Practice* 1997;4(4):291–306.
44. Fedoroff IC, Taylor S. Psychological and pharmacological treatments of social phobia: a meta-analysis. *J Clin Psychopharmacol* 2001;21(3):311–24.
45. Taylor S. Meta-analysis of cognitive-behavioral treatments for social phobia. *J Behav Ther Exp Psychiatry* 1996;27(1):1–9.
46. Heimberg RG, Liebowitz MR, Hope DA, et al. Cognitive behavioral group therapy vs. phenelzine therapy for social phobia. *Arch Gen Psychiatry* 1998;55(12):1133–41.
47. Liebowitz MR, Heimberg RG, Schneier FR, et al. Cognitive-behavioral group therapy versus phenelzine in social phobia: long-term outcome. *Depress Anxiety* 1999;10(3):89–98.
48. Blanco C, Heimberg RG, Schneier FR, et al. A placebo-controlled trial of phenelzine, cognitive behavioral group therapy and their combination for social anxiety disorder [Under review].
49. Blomhoff S, Haug TT, Hellström K, et al. Randomised controlled general practice trial of sertraline, exposure therapy and combined treatment in generalised social phobia. *Br J Psychiatry* 2001;179(1):23–30.
50. Haug TT, Blomhoff S, Hellstrøm K, et al. Exposure therapy and sertraline in social phobia: 1-year follow-up of a randomised controlled trial. *Br J Psychiatry* 2003;182(4):312–8.
51. Guastella AJ, Richardson R, Lovibond PF, et al. A randomized controlled trial of D-cycloserine enhancement of exposure therapy for social anxiety disorder. *Biol Psychiatry* 2008;63(6):544–9.
52. Hofmann SG, Meuret AE, Smits JA, et al. Augmentation of exposure therapy with D-cycloserine for social anxiety disorder. *Arch Gen Psychiatry* 2006;63(6):298–304.
53. Westra HA, Dozois DJA. Preparing clients for cognitive behavioral therapy: a randomized pilot study of motivational interviewing for anxiety. *Cognit Ther Res* 2006;30(4):481–98.
54. Miller WR, Rollnick S. *Motivational interviewing: preparing people for change*. New York: Guilford; 2002.
55. Kabat-Zinn J. Mindfulness-based interventions in context: past, present, and future. *Clinical Psychology: Science and Practice* 2003;10(2):144–56.
56. Grossman P, Niemann L, Schmidt S, et al. Mindfulness-based stress reduction and health benefits: a meta-analysis. *J Psychosom Res* 2004;57(1):35–43.
57. Kabat-Zinn J, Massion AO, Kristeller J, et al. Effectiveness of a meditation-based stress reduction program in the treatment of anxiety disorders. *Am J Psychiatry* 1992;149(7):936–43.
58. Koszycki D, Bengler M, Shlik J, et al. Randomized trial of a meditation-based stress reduction program and cognitive behavior therapy in generalized social anxiety disorder. *Behav Res Ther* 2007;45(10):2518–26.
59. Roemer L, Orsillo SM. An open trial of an acceptance-based behavior therapy for generalized anxiety disorder. *Behav Ther* 2007;38(1):72–85.
60. Dalrymple KL, Herbert JD. Acceptance and commitment therapy for generalized social anxiety disorder. *Behav Modif* 2007;31(5):543–68.
61. Ossman WA, Wilson KG, Storaasli RD, et al. A preliminary investigation of the use of acceptance and commitment therapy in a group treatment for social

- phobia. *International Journal of Psychology and Psychological Therapy* 2006; 6(3):397–416.
62. Hayes SC, Wilson KG, Gifford EV, et al. Experiential avoidance and behavioral disorders: a functional dimensional approach to diagnosis and treatment. *J Consult Clin Psychol* 1996;64(6):1152–68.
 63. Stein MB, Goldin PR, Sareen J, et al. Increased amygdala activation to angry and contemptuous faces in generalized social phobia. *Arch Gen Psychiatry* 2002;59(11):1027–34.
 64. Furmark T, Tillfors M, Marteinsdottir I, et al. Common changes in cerebral blood flow in patients with social phobia treated with citalopram or cognitive-behavioral therapy. *Arch Gen Psychiatry* 2002;59(5):425–33.
 65. Hofmann SG. Treatment of social phobia: potential mediators and moderators. *Clinical Psychology: Science and Practice* 2000;7(1):3–16.
 66. Hofmann SG. Cognitive mediation of treatment change in social phobia. *J Consult Clin Psychol* 2004;72(3):392–9.
 67. Moscovitch DA, Hofmann SG, Suvak MK, et al. Mediation of changes in anxiety and depression during treatment of social phobia. *J Consult Clin Psychol* 2005; 73(5):945–52.
 68. Edelman RE, Chambless DL. Adherence during sessions and homework in cognitive-behavioral group treatment of social phobia. *Behav Res Ther* 1995; 33(5):573–7.
 69. Leung AW, Heimberg RG. Homework compliance, perceptions of control, and outcome of cognitive-behavioral treatment of social phobia. *Behav Res Ther* 1996;34(5–6):423–32.
 70. Woody SR, Adessky RS. Therapeutic alliance, group cohesion, and homework compliance during cognitive-behavioral group treatment of social phobia. *Behav Ther* 2002;33(1):5–27.
 71. Hayes SA, Hope DA, VanDyke M, et al. Working alliance for clients with social anxiety disorder: relationship with session helpfulness and within-session habituation. *Cogn Behav Ther* 2007;36(1):34–42.
 72. Safren SA, Heimberg RG, Juster HR. Clients' expectancies and their relationship to pretreatment symptomatology and outcome of cognitive-behavioral group treatment for social phobia. *J Consult Clin Psychol* 1997;65(4):694–8.
 73. Chambless DL, Tran GQ, Glass CR. Predictors of response to cognitive-behavioral group therapy for social phobia. *J Anxiety Disord* 1997;11(3):221–40.
 74. Taube-Schiff M, Suvak MK, Antony MM, et al. Group cohesion in cognitive-behavioral group therapy for social phobia. *Behav Res Ther* 2007;45(4): 687–98.
 75. Stopa L, Clark DM. Cognitive processes in social phobia. *Behav Res Ther* 1993; 31(3):255–67.
 76. Schultz LT, Heimberg RG. Attentional focus in social anxiety disorder: potential for interactive processes. *Clin Psychol Rev* 2008;28(7):1206–21.
 77. Coles ME, Heimberg RG. Memory biases in the anxiety disorders: current status. *Clin Psychol Rev* 2002;22(4):587–627.
 78. Brozovich F, Heimberg RG. An analysis of post-event processing in social anxiety disorder. *Clin Psychol Rev* 2008;28(6):891–903.
 79. Papageorgiou C, Wells A. Nature, functions, and beliefs about depressive rumination. In: Papageorgiou C, Wells A, editors. *Depressive rumination: nature, theory, and treatment*. Hoboken (NJ): Wiley & Sons; 2003. p. 3–20.
 80. Spasojevic J, Alloy LB, Abramson LY, et al. Reactive rumination: outcomes, mechanisms, and developmental antecedents. In: Papageorgiou C, Wells A,

- editors. Depressive rumination: nature, theory, and treatment. Hoboken (NJ): Wiley & Sons; 2003. p. 43–58.
81. Brown EJ, Juster HR, Heimberg RG, et al. Stressful life events and personality styles: relation to impairment and treatment outcome in patients with social phobia. *J Anxiety Disord* 1998;12(3):233–51.
 82. Watson D, Clark LA, Carey G. Positive and negative affectivity and their relation to anxiety and depressive disorders. *J Abnorm Psychol* 1988;97(3):346–53.
 83. Hughes AA, Heimberg RG, Coles ME, et al. Relations of the factors of the tripartite model of anxiety and depression to types of social anxiety. *Behav Res Ther* 2006;44(11):1629–41.
 84. Clark LA, Watson D. Mood and the mundane: relations between daily life events and self-reported mood. *J Pers Soc Psychol* 1988;54(2):296–308.
 85. Kashdan T. Social anxiety spectrum and diminished positive experiences: theoretical synthesis and meta-analysis. *Clin Psychol Rev* 2007;27(3):348–65.
 86. Grant DM, Beck JG. Attentional biases in social anxiety and dysphoria: does comorbidity make a difference? *J Anxiety Disord* 2006;20(4):520–9.
 87. Musa C, Lépine JP, Clark DM, et al. Selective attention in social phobia and the moderating effect of a concurrent depressive disorder. *Behav Res Ther* 2003;41(9):1043–54.
 88. Erwin BA, Heimberg RG, Juster H, et al. Comorbid anxiety and mood disorders among persons with social anxiety disorder. *Behav Res Ther* 2002;40(1):19–35.
 89. Ledley DR, Huppert JD, Foa EB, et al. Impact of depressive symptoms on the treatment of generalized social anxiety disorder. *Depress Anxiety* 2005;22(4):161–7.
 90. Marom S, Gilboa-Schechtman E, Aderka IM, et al. Impact of depression on treatment effectiveness and gains maintenance in social phobia: a naturalistic study of cognitive behavior group therapy. *Depress Anxiety* 2009;26(3):289–300.
 91. Dimidjian S, Hollon SD, Dobson KS, et al. Randomized trial of behavioral activation, cognitive therapy, and antidepressant medication in the acute treatment of adults with major depression. *J Consult Clin Psychol* 2006;74(4):658–70.
 92. Herbert JD, Hope DA, Bellack AS. Validity of the distinction between generalized social phobia and avoidant personality disorder. *J Abnorm Psychol* 1992;101(2):332–9.
 93. Holt CS, Heimberg RG, Hope DA. Avoidant personality disorder and the generalized subtype of social phobia. *J Abnorm Psychol* 1992;101(2):318–25.
 94. Schneier FR, Spitzer RL, Gibbon D, et al. The relationship of social phobia subtypes and avoidant personality disorder. *Compr Psychiatry* 1991;32(6):496–502.
 95. Turner SM, Beidel DC, Townsley RM. Social phobia: a comparison of specific and generalized subtypes and avoidant personality disorder. *J Abnorm Psychol* 1992;101(2):326–31.
 96. Heimberg RG. Social phobia, avoidant personality disorder, and the multiaxial conceptualization of interpersonal anxiety. In: Salkovskis PM, editor. *Trends in cognitive and behavioural therapies*. West Sussex: Wiley; 1996. p. 43–61.
 97. Chambless DL, Fydrich T, Rodebaugh TL. Generalized social phobia and avoidant personality disorder: meaningful distinction or useless duplication? *Depress Anxiety* 2008;25(1):8–19.
 98. Huppert JD, Strunk DR, Ledley DR, et al. Generalized social anxiety disorder and avoidant personality disorder: structural analysis and treatment outcome. *Depress Anxiety* 2008;25(5):441–8.

99. Brown EJ, Heimberg RG, Juster HR. Social phobia subtype and avoidant personality disorder: effect on severity of social phobia, impairment, and outcome of cognitive behavioral treatment. *Behav Ther* 1995;26(3):467–86.
100. Feske U, Perry KJ, Chambless DL, et al. Avoidant personality disorder as a predictor for treatment outcome among generalized social phobics. *J Personal Disord* 1996;10(2):174–84.
101. Taylor CT, Lapsa JM, Alden LE. Is avoidant personality disorder more than just social avoidance? *J Personal Disord* 2004;18(6):571–94.
102. Barlow DH, Allen LB, Choate ML. Toward a unified treatment for emotional disorders. *Behav Ther* 2004;35(2):205–30.
103. Norton PJ, Philipp LM. Transdiagnostic approaches to the treatment of anxiety disorders: a quantitative review. *psychotherapy theory, research, practice. Training* 2008;45(2):214–26.
104. Morris EP, Stewart SH, Ham LS. The relationship between social anxiety disorder and alcohol use disorders: a critical review. *Clin Psychol Rev* 2005;25(6):734–60.
105. Buckner JD, Ledley DR, Heimberg RG, et al. Treating comorbid social anxiety and alcohol use disorders: combining motivation enhancement therapy with cognitive-behavioral therapy. *Clinical Case Studies* 2008;7(3):208–23.
106. Jack MS, Heimberg RG, Mennin DS. Situational panic attacks: impact on social phobia with and without panic disorder. *Depress Anxiety* 1999;10(3):112–8.
107. Brozovich F, Jørstad-Stein EC, Heimberg R. Panic symptomatology among individuals with social anxiety disorder or generalized anxiety disorder [Poster session 3C: social anxiety, social phobia; abstract 5]. In: 42nd Annual Convention of the Association for Behavioral and Cognitive Therapies. Orlando: November 14–17, 2008.
108. Barrett PM, Rapee RM, Dadds MR, et al. Family enhancement of cognitive style in anxious and aggressive children. *J Abnorm Child Psychol* 1996;24(2):187–203.
109. Beesdo K, Bittner A, Pine DS, et al. Incidence of social anxiety disorder and the consistent risk for secondary depression in the first three decades of life. *Arch Gen Psychiatry* 2007;64(8):903–12.
110. Barrett P, Turner C. Prevention of anxiety symptoms in primary school children: preliminary results from a universal school-based trial. *Br J Clin Psychol* 2001;40(4):399–410.
111. Dadds MR, Holland DE, Laurens KR, et al. Early intervention and prevention of anxiety disorders in children: results at 2-year follow-up. *J Consult Clin Psychol* 1999;67(1):145–50.
112. Liebowitz MR, Heimberg RG, Fresco DM, et al. Social phobia or social anxiety disorder: what's in a name? *Arch Gen Psychiatry* 2000;57(2):191–2.
113. Schneier FR, Liebowitz MR, Beidel DC, et al. MacArthur data reanalysis for DSM-IV: social phobia. In: Widiger TA, Frances AH, Pincus HA, et al, editors, *DSM-IV source book, vol. 4*. Washington, DC: American Psychiatric Press; 1998. p. 307–28.
114. Stein MB, Chartier MJ, Hazen AL, et al. A direct interview family study of generalized social phobia. *Am J Psychiatry* 1998;155(1):90–7.
115. Vriends N, Becker ES, Meyer A, et al. Subtypes of social phobia: are they of any use? *J Anxiety Disord* 2007;21(1):59–75.
116. Butler G. Exposure as treatment for social phobia: some instructive difficulties. *Behav Res Ther* 1985;23(6):651–7.

117. Butler G. Issues in the application of cognitive and behavioral strategies to the treatment of social phobia. *Clin Psychol Rev* 1989;9(1):91–106.
118. Hope DA, Heimberg RG, Juster H, et al. *Managing social anxiety: a cognitive-behavioral therapy approach (Client Workbook)*. New York: Oxford University Press; 2000.
119. Hope DA, Heimberg RG, Turk CL. *Therapist guide for managing social anxiety: a cognitive-behavioral therapy approach*. New York: Oxford University Press; 2006.
120. Lincoln TM, Rief W, Hahlweg K, et al. Effectiveness of an empirically supported treatment for social phobia in the field. *Behav Res Ther* 2003;41(11):1251–69.
121. Barlow DH, Levitt JT, Bufka LF. The dissemination of empirically supported treatments: a view to the future. *Behav Res Ther* 1999;37(S1):S147–62.
122. Gaston JE, Abbott MJ, Rapee RM, et al. Do empirically supported treatments generalize to private practice? A benchmark study of a cognitive-behavioural group treatment programme for social phobia. *Br J Clin Psychol* 2006;45(1):33–48.
123. McEvoy PM. Effectiveness of cognitive behavioural group therapy for social phobia in a community clinic: a benchmarking study. *Behav Res Ther* 2007;45(12):3030–40.