

Brief Cognitive Behavioral Group Therapy for Social Anxiety Disorder

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The growth of managed health care in the United States has placed a high premium on the goal of efficiency in the treatment of psychopathology, but without sacrificing treatment efficacy in the process. A preliminary evaluation of a brief, 6-week version of cognitive behavioral group therapy (CBGT) for generalized social anxiety disorder was conducted. Various self-report and behavioral assessment measures were collected at pre- and posttreatment, and self-report assessments were again conducted at 6- and 12-week follow-ups. The results suggest improvement during the acute 6-week treatment phase, and further improvement during the 6 weeks following treatment termination. These gains were maintained at the 3-month follow-up assessment. Effect size comparisons with prior studies revealed that the present treatment produced comparable treatment gains at the 6-week follow-up assessment to those produced by prior studies using the standard 12-week CBGT protocol. Clinical and research implications are discussed.

THE RISE of managed health care in the United States has placed a high premium on efficiency in the delivery of assessment and intervention services for psychological disorders. Ideally, however, such efficiency should not come at the expense of efficacy. Consequently, treatments aimed at achieving rapid yet clinically significant and durable results are being developed and evaluated. For example, Öst (1989) has developed an effective protocol for the treatment of a variety of specific phobias in a single, prolonged session.

In addition to specific phobias, a growing number of pharmacologic and psychotherapeutic interventions have been shown to be effective for many persons suffering from various anxiety disorders (Craske, 1999). Although most empirically supported psychotherapies for anxiety disorders tend to be relatively brief compared to traditional psychodynamic approaches, they can still require upwards of 3 months of treatment. This raises questions about the cost-effectiveness of psychotherapy relative to pharmacotherapy, at least in the short-term (Ballenger et al., 1998; Davidson, 1998, 2000).

A case in point is social anxiety disorder (SAD), also known as social phobia, a common disorder characterized by fear of embarrassment, humiliation, and negative evaluation by others in social situations. The generalized subtype of SAD, in which fear and avoidance extend to most social situations, is associated with substantial distress and impairment in social, education, and occupational functioning, as well as high rates of comorbidity with other mood, anxiety, and substance abuse disorders (Lépine & Pelissolo, 2000; Norton et al., 1996; Rapee,

1995; Turner, Beidel, Borden, Stanley, & Jacob, 1991; Wittchen, Fuetsch, Sonntag, Müller, & Liebowitz, 1999). Significant advances have been made over the past 15 years in the treatment of SAD, although the majority of individuals with SAD go untreated (Magee, Eaton, Wittchen, McGonagle, & Kessler, 1996; Schneier, Johnson, Hornig, Liebowitz, & Weissman, 1992; Wittchen, Stein, & Kessler, 1999). Various forms of behavior and cognitive-behavior therapy have been demonstrated to be helpful for many persons with SAD, including exposure-based treatments (Emmelkamp, Mersch, Vissia, & van der Helm, 1985; Fava, Grandi, & Canestrari, 1989), cognitive interventions such as Rational Emotive Behavior Therapy (DiGiuseppe, McGowan, Sutton-Simon, & Gardner, 1990; Mattick & Peters, 1988), Self-Instructional Training (DiGiuseppe et al., 1990; Emmelkamp et al., 1985; Jerremalm, Jansson, & Öst, 1986), social skill training (Stravynski, Marks, & Yule, 1982; Wlazlo, Schroeder-Hartwig, Hand, Kaiser, & Münchau, 1990), exposure plus social skills training (Turner, Beidel, Cooley, Woody, & Messer, 1994), and relaxation training (Jerremalm et al., 1986; Öst, Jerremalm, & Johansson, 1981). The most widely researched treatments for SAD are those that combine exposure (EXP) and cognitive therapy (CT). Nevertheless, the additive effects of CT over EXP alone remain controversial. In a meta-analysis of various psychotherapies for SAD, Taylor (1996) found that those combining these two components had the highest average effect size of all treatments studied. Similar meta-analyses by Feske and Chambless (1995) and Gould, Buckminster, Pollack, Otto, and Yapp (1997), however, found no evidence for the additive effects of CT over EXP alone. In a comprehensive review of the mechanisms of change in psychotherapies for SAD, Hofmann (2000) concluded that this issue remains unresolved, although there is at present little evidence for the additive effects of cognitive interventions over EXP alone.

Cognitive and Behavioral Practice 9, 1–8, 2002

1077-7229/02/1–8\$1.00/0

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 **Continuing Education Quiz located on p. 79.**

The most widely used EXP plus CT protocol for SAD, known as cognitive behavioral group therapy (CBGT), was developed by Heimberg and colleagues (Heimberg, 1991; Heimberg & Becker, in press). CBGT is typically delivered to groups of 6 to 8 individuals by two cotherapists over 12 weekly sessions (Heimberg, Becker, Goldfinger, & Vermilyea, 1985). CBGT has been shown to be effective in several studies, demonstrating superiority relative to emotional-supportive group psychotherapy (Heimberg et al., 1990) and to pill placebo (Heimberg et al., 1998); see Heimberg and Juster (1995) for a review. Despite strong evidence of efficacy, the mechanisms responsible for the effectiveness of CBGT remain unclear. CBGT integrates exposure exercises with cognitive restructuring, although it is the cognitive component that is theorized to mediate therapeutic improvement.

Pharmacotherapy of SAD with antidepressant medication has also been shown to be effective (Lydiard, Brawman-Mintzer, & Ballenger, 1996; Walker & Kjernisted, 2000), and may in fact be more cost-effective in the short-term. The primary drawback of pharmacotherapy is the high risk of relapse following medication discontinuation (Davidson, 1998, 2000). If a more efficient version of the standard 12-week CBGT protocol could be developed, it may resolve questions about cost-effectiveness relative to pharmacotherapy, while potentially preserving the long-term protection against relapse afforded by effective psychotherapy.

The purpose of this study was to conduct a preliminary investigation of the efficacy of a brief, 6-week version of CBGT for generalized SAD. Our CBGT protocol is modeled closely on the standard Heimberg (1991) program. As described further below, however, our protocol differs in two important respects: (a) the overall length of treatment is reduced by half, and (b) social skills training is integrated into the simulated exposure exercises. The specific questions addressed were: (a) how does a brief version of CBGT for SAD compare to the standard 12-week protocol at the immediate posttreatment assessment for each treatment? (b) how do individuals who receive the brief treatment compare to those who receive the standard treatment at a comparable point in time (i.e., at 12 weeks following the initiation of treatment)? and (c) how durable are the gains produced by the brief treatment?

Method

Participants

Twenty-six individuals were recruited through local media to participate in a treatment study through an urban, university-based research clinic in Philadelphia, Pennsylvania. Twenty-one subjects completed the full 6-week treatment protocol and postassessment battery; 5

subjects either terminated treatment prematurely or did not participate in the posttreatment assessment. The sample was comprised of 16 women (61.5%) and 10 men (38.5%), ranging in age from 20 to 59 ($M = 41$, $SD = 10.6$). The majority of the participants were Caucasian (73%) or African American (23%). Of the 26 participants, 17 (65%) had no other Axis I diagnosis, 2 (8%) had comorbid major depression, 2 (8%) had a comorbid generalized anxiety disorder, 2 (8%) had comorbid dysthymic disorder, and 3 (12%) had some other Axis I diagnosis. In addition, 15 of the participants (58%) met criteria for avoidant personality disorder. Of the 26 participants, 9 (35%) were single, 10 (39%) were married, 5 (19%) were divorced, 1 (4%) was separated, and 1 (4%) was widowed. Ten (39%) of the participants had a college degree, 7 (27%) had some college experience, 5 (19%) had graduate school or professional school training, and 4 (15%) had a high school diploma. With regard to employment status at the beginning of the study, 16 (62%) participants were working full time, 6 (23%) were unemployed, 1 (4%) was working part-time, and 3 (12%) were full-time students. In summary, the sample consisted of a generally well-educated group of Caucasian and African-American individuals, many of whom had comorbid mood or anxiety disorders in addition to a primary diagnosis of SAD, generalized type.

Potential participants underwent an initial 20-minute structured telephone screening in which the purpose of the study was explained and a brief assessment of current symptoms was obtained. Interested participants were then invited to the clinic and evaluated using the Structured Clinical Interview for the *DSM-IV* (SCID-IV; First, Spitzer, Gibbon, & Williams, 1994), as well as the social phobia section of the Anxiety Disorder Interview Schedule for *DSM-IV* (Brown, Di Nardo, & Barlow, 1994). The avoidant personality disorder section of the Axis II version of the SCID-IV was also administered. All participants met *DMS-IV* criteria for a primary diagnosis of the generalized subtype of SAD. The generalized subtype was defined as clinically significant fear and/or avoidance of three or more distinct social situations. When a comorbid Axis I disorder was present, SAD was judged to be clearly primary to, and of greater severity than, the secondary diagnosis. Primacy was defined as the disorder with the earliest onset, and severity was defined in terms of the level of symptomatology associated with the condition, as well as the degree of impairment attributed to it. Exclusion criteria included a history of mental retardation, pervasive developmental disorder, organic mental disorder, current substance dependence (within the past 6 months), acute suicide potential, an untreated medical condition that might confuse the diagnosis of an anxiety disorder, or a previous trial of behavior or cognitive-behavior therapy for SAD.

Procedure

Participants were administered 6 weeks of CBGT. Groups were 2 hours long, comprised of 4 to 6 participants, and co-led by two advanced doctoral candidates in clinical psychology, supervised by the first author. The treatment protocol was adapted from the treatment program developed by Heimberg (1991), which is typically conducted over 12 or more weeks (Heimberg & Juster, 1995). As discussed above, in addition to halving the duration of treatment, the Heimberg protocol was further modified by the addition of social skills training (SST). In the first treatment session, participants were provided an overview of a cognitive-behavioral model of SAD, and were taught to identify negative cognitions and challenge logical errors in their thinking. The rationale behind SST was explained, and various relevant social skills were discussed (e.g., eye contact, voice volume). Beginning with session two, participants confronted increasingly difficult feared social situations through simulated exposure exercises conducted in session, and were assigned related homework assignments. Both cognitive restructuring and SST were fully integrated into these exposure exercises.

Pre- and posttreatment assessments included numerous self-report questionnaires, as well as ratings of various social skill indices derived from a videotaped behavioral test by observers who were blind to assessment occasion. Follow-up self-report measures were again collected via mail 6 weeks and again 3 months following termination of treatment.

Materials

Participants completed a demographic questionnaire, as well as a battery of self-report measures of anxiety, depression, and related constructs.

The Social Phobia Anxiety Inventory (SPAI; Turner, Beidel, Dancu, & Stanley, 1989) is an empirically derived 45-item scale that assesses the clinical features of social phobia. The 32-item Social Phobia subscale of the SPAI was employed (SPAI-SP). The SPAI has been shown to have good test-retest reliability, internal consistency, discriminant validity, and concurrent and external validity (Beidel, Bordon, Turner, & Jacob, 1989; Beidel, Turner, Stanley, & Dancu, 1989; Herbert, Bellack, & Hope, 1991; Turner et al., 1989).

The Fear Questionnaire (FQ; Marks & Mathews, 1979) is a 15-item scale assessing avoidance behaviors associated with social situations, agoraphobia, and blood/injury phobia. The 5-item social phobia subscale was employed. The FQ demonstrates high test-retest reliability, good internal consistency, and good discriminant validity (Cox, Parker, & Swinson, 1996; Cox, Swinson, & Parker, 1993; Cox, Swinson, & Shaw, 1991; Michelson & Mavissakalian, 1983; Oei, Moylan, & Evans, 1991; Van Zuuren, 1988).

Leibowitz Social Anxiety Scale (LSAS; Liebowitz,

1987) is a 24-item scale assessing ratings of fear and avoidance of a range of social situations. The scale has been commonly used as an assessment instrument in pharmacological treatment studies of SAD and has been shown to have adequate psychometric properties (Davidson et al., 1993; Liebowitz et al., 1988; Reich & Yates, 1988). The LSAS was originally designed as a clinician-rated measure, but is frequently used as a self-report questionnaire (Greist, Kobak, Jefferson, Katzelnick, & Chene, 1995).

Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) is a 21-item inventory assessing symptoms of depression over the past week. The BDI is the most widely used self-report measure of depression, and is supported by an extensive psychometric literature (see Beck, Steer, & Garbin, 1988, for a review).

Behavioral assessment. Three 3-minute behavioral tasks were administered for assessment of social performance. They included (a) a dyadic role-play involving a simulated interaction with a stranger; (b) a triadic role-play involving an interaction with two strangers; and (c) an impromptu speech. Role-play tests are commonly used in the behavioral assessment of social anxiety (Glass & Arnkoff, 1989; Herbert, Rheingold, & Brandsma, 2000; McNeil, Ries, & Turk, 1995). The role-play interactions and the impromptu speech were videotaped and rated by trained observers on quality of verbal content, nonverbal content, and of paralinguistic features using 5-point Likert scales. The observers were blind to assessment time point. Interrater reliability was good ($\kappa = .72$ for 63% of the sample).

Immediately prior to each of the behavioral assessment tasks, participants were asked to provide a rating of their level of anxiety on a 0-to-100 Subjective Units of Discomfort Scale (SUDS), with higher numbers indicating increased anxiety (Wolpe & Lazarus, 1996). Following each task, participants were asked to rate their level of anxiety immediately after the task, as well as their highest level of anxiety during the task.

Results

Preliminary Analysis

Five of the 26 participants terminated treatment prematurely. No significant differences were found between treatment completers and those who dropped out on any demographic variables or pretest measures.

Assessment of Treatment Outcome

Behavioral assessment. The social performance ratings were examined in order to assess potential differences between pretreatment and posttreatment ratings of verbal content, nonverbal content, paralinguistics, and overall social performance. Descriptive statistics for pre- and posttreatment ratings are presented in Table 1. Matched

Table 1
Means, Standard Deviations, and Significance of Changes for Behavioral Assessment of Social Performance and SUDS Ratings

	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Dyadic role-play					
Verbal content	2.76	.77	3.76	.83	-5.92 ($p < .001$)
Nonverbal content	2.62	.86	3.43	.98	-4.95 ($p < .001$)
Paralinguistics	2.62	.97	3.29	1.06	-3.84 ($p < .01$)
Overall social perf. rating	2.62	.74	3.24	.77	-4.81 ($p < .001$)
Highest SUDS	67.65	20.13	50.50	19.32	3.97 ($p < .01$)
Triadic role-play					
Verbal content	2.80	.89	3.60	.75	-5.14 ($p < .001$)
Nonverbal content	2.65	.88	3.40	.88	-5.25 ($p < .001$)
Paralinguistics	2.55	1.00	3.15	.88	-3.94 ($p < .01$)
Overall social perf. rating	2.60	.68	3.20	.62	-5.34 ($p < .001$)
Highest SUDS	66.75	16.41	51.15	13.71	4.09 ($p < .01$)
Impromptu speech					
Verbal content	3.10	1.00	3.86	.96	-3.93 ($p < .01$)
Nonverbal content	2.52	.87	3.43	1.03	-4.39 ($p < .001$)
Paralinguistics	2.62	1.07	3.43	1.08	-3.44 ($p < .01$)
Overall social perf. rating	2.62	.74	3.52	.81	-4.66 ($p < .001$)
Highest SUDS	68.25	17.57	54.40	17.75	2.60 ($p < .05$)

Note. Social performance ratings were made on 5-point Likert scales (1 = *poor skills* and 5 = *excellent skills*).

sample t tests were computed on these ratings for each of the three tasks comprising the behavioral assessment procedure (i.e., the two role-play scenarios and the impromptu speech). All social performance ratings showed significant pre- to posttreatment improvements for each of the three tasks. For the dyadic role play, the t tests were significant for verbal, nonverbal, paralinguistic, and overall social performance ratings ($t = -5.92, p < .001$; $t = -4.95, p < .001$; $t = -3.84, p < .01$; $t = -4.81, p < .001$, respectively). Likewise, for the triadic role-play, the verbal, nonverbal, paralinguistic, and overall social performance ratings were significant ($t = -5.14, p < .001$; $t = -5.25, p < .001$; $t = -3.94, p < .01$; $t = -5.34, p < .001$, respectively). For the impromptu speech, the verbal, nonverbal, paralinguistic, and overall social performance ratings were also significant ($t = -3.93, p < .01$; $t = -4.39, p < .001$; $t = -3.44, p < .01$; $t = -4.66, p < .001$, respectively).

In order to examine potential differences between pre- and posttreatment SUDS ratings, t tests were computed on the highest SUDS rating given during each of the three role-play scenarios. These SUDS ratings were significant for the dyadic role-play, the triadic role-play, and the impromptu speech ($t = 3.97, p < .01$; $t = 4.09, p < .01$; and $t = 2.60, p < .05$, respectively).

Self-report measures. A repeated-measures multivariate analysis of variance (MANOVA) was computed on the self-report measures of the 21 participants who completed treatment. Of these 21 completers, 9 also completed the 6-week follow-up and 12 completed the 3-

month follow-up. The MANOVA examined four assessment occasions: pretreatment, posttreatment, 6-week follow-up, and 3-month follow-up. Due to the small number of participants who completed all follow-up assessments, the analyses described below were conducted by replacing missing data with the group mean for that data point.¹

The MANOVA was significant, Wilks's Lambda = 0.253, $F(15, 229) = 9.88, p < .0001$, as were univariate analyses of variance (ANOVAs) on each individual measure (with p values $< .0001$ for each univariate F test), revealing significant changes over time for all measures (see Table 2).

The results of Tukey post hoc tests are presented in Table 2. On the SPAI-SP, there were significant decreases from pre- to posttreatment, and again from posttreatment to 6-week follow-up. There were no further changes between the 6-week and 3-month follow-up assessments (see Figure 1). This same pattern of results was observed for the LSAS Total Fear score. These results suggest that participants not only improved during

the course of treatment, but actually continued making gains during the 6 weeks following termination of treatment. Moreover, those gains were maintained during the 3-month follow-up period. A slightly different pattern of results was obtained on the LSAS Total Avoidance scale and the FQ-Social Phobia scale (FQ-SP). On these measures there was no significant change from pre- to posttreatment. There were significant decreases in symptoms, however, from posttreatment to the 6-week follow-up, and these gains were maintained at the 3-month follow-up (see Figure 2). Finally, on the BDI, participants improved from pretreatment to posttreatment, and no further changes occurred at either follow-up assessment.

Effect sizes relative to prior studies. The magnitude of change across time was compared with the results of prior studies that utilized a similar cognitive behavior therapy treatment protocol for SAD, and that also used

¹ These ANOVAs were also conducted in two additional manners: (a) on only the small subset of the sample that completed both follow-up assessments, and (b) by intent-to-treat analyses, whereby missing data were replaced by data from the previous time point, that is, by carrying forward the last available assessment. Both sets of analyses yielded similar results to those reported here, so all three sets of analyses are not presented in detail. Each of these strategies is associated with certain problems in the context of missing follow-up data. Focusing only on treatment completers might provide an overly optimistic picture, whereas the intent-to-treat analyses may underestimate treatment effects. While recognizing the limitations associated with our small follow-up samples, we conclude that the analytic strategy reported here provides the best representation of the available data.

Table 2
Means, Standard Deviations, and Significant Differences of Self-Report Measures

Measures	Pretreatment		Posttreatment		6-Week Follow-up		3-Month Follow-up	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
SPAI-SP	134.35 ^a	32.26	110.50 ^b	31.30	81.87 ^c	17.58	90.80 ^c	25.48
LSAS Total Avoidance	33.53 ^a	11.13	29.43 ^a	13.01	21.56 ^b	6.57	19.64 ^b	8.29
LSAS Total Fear	37.47 ^a	10.68	32.48 ^b	13.31	24.78 ^c	6.20	25.68 ^c	7.08
FQ-Social Phobia	19.29 ^a	6.79	17.00 ^a	7.09	12.78 ^b	3.30	13.37 ^b	4.32
BDI	8.05 ^a	5.22	4.81 ^b	4.38	4.89 ^b	2.38	4.10 ^b	2.73

Note. Means with different superscripts are significantly different at $p < .05$. SPAI-SP = Social Phobia Anxiety Inventory–Social Phobia Subscale; LSAS Total Avoidance = Liebowitz Social Anxiety Scale–Total Avoidance Scale; LSAS Total Fear = Liebowitz Social Anxiety Scale–Total Fear Scale; FQ–Social Phobia = Fear Questionnaire Social Phobia Subscale; BDI = Beck Depression Inventory.

the same dependent measures. Effect sizes (ES) were calculated according to Cohen's d statistic, $(M_{pre} - M_{post}) / SD_{pooled}$, where $SD_{pooled} = \sqrt{[(SD_{pre}^2 + SD_{post}^2) / 2]}$. Each of these comparison studies utilized 12 weekly treatment sessions. The results for the FQ-SP for all of the studies compared are presented in Table 3; the FQ-SP was chosen for comparative purposes as it was the outcome measure included in the present study that was most commonly used in the comparable CBGT trials.

Inspection of Table 3 reveals an interesting pattern of results. Not surprisingly, the degree of change in the present study from pre- to posttreatment (after 6 weeks) was less than the posttreatment gains obtained in the studies utilizing 12 weeks of treatment. By the 6-week follow-up assessment, however, our participants achieved comparable gains to those obtained at posttreatment in prior studies, with a large ES of 1.22 on the FQ-SP. In other words, it appears that participants in the present

study, 12 weeks after the initiation of treatment, achieved gains comparable to those obtained in prior trials of 12 weeks of treatment, even though the present participants obtained only half the total amount of treatment.

These results were not limited to the FQ-SP. The pretreatment to 12-week ESs for the other anxiety measures were even larger, with 2.02 for the SPAI-SP, 1.31 for the LSAS–Total Avoidance subscale, and 1.45 for the LSAS–Total Fear subscale. These gains are higher than the mean ES of 1.06 for various measures reported by Taylor (1996) in a meta-analysis of studies of similar CBT treatments.

Discussion

The present results are encouraging with respect to the efficacy of a brief but highly intensive treatment for generalized SAD. Participants demonstrated significant

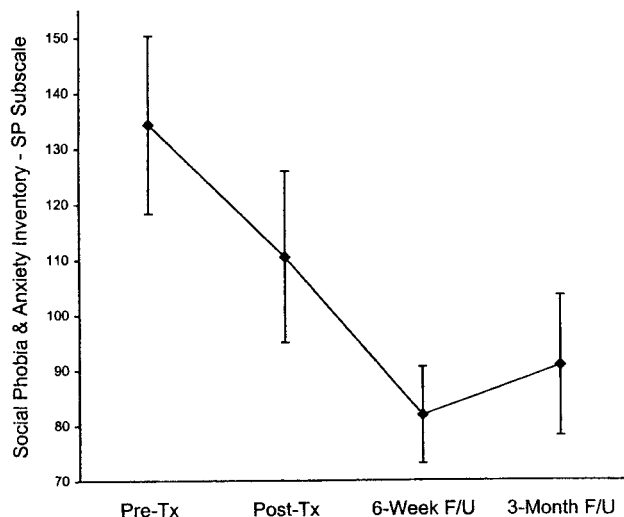


Figure 1. Mean changes in Social Phobia and Anxiety Inventory–Social Phobia subscale from pretreatment through 3-month follow-up assessment.

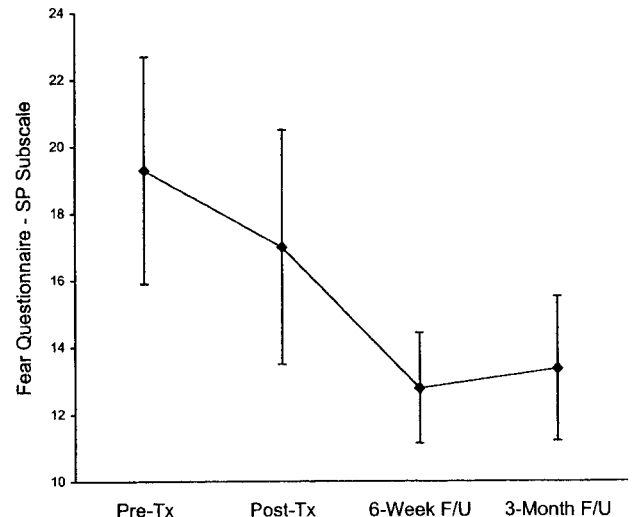


Figure 2. Mean changes in Fear Questionnaire–Social Phobia subscale from pretreatment through 3-month follow-up assessment.

Table 3
Effect Size Analyses Relative to Prior Studies: Fear Questionnaire–Social Phobia Subscale

Study	Pretreatment		6 Weeks		12 Weeks		Effect Size Pretreatment to 12 Weeks
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Present study	19.29	6.79	17.00	7.09	12.78	3.30	1.22
Heimberg et al. (1990)	20.83	6.81			12.89	7.46	1.11
Gelertner et al. (1991)	20.80	5.70			11.50	6.50	1.52
Heimberg et al. (1998)	19.00	7.20			14.65	3.99	0.75
Taylor (1996) meta-analysis							1.06

Note. Effect size from Taylor (1996) based on meta-analysis of 11 studies of cognitive therapy plus exposure, utilizing four outcome measures, including three used in the present study (the FQ-SP, SPAI, and LSAS) as well as the Social Interaction Anxiety Scale (Mattick, Peters, & Clarke, 1989).

improvement over the course of treatment as assessed by self-report measures, subjective anxiety ratings made during a role-play test, as well as various social skill ratings made by observers blind to assessment occasion. Of particular interest is the fact that further improvements continued to accrue in the 6 weeks following completion of treatment. In fact, in absolute terms, the magnitude of gains during the 6 weeks immediately following completion of treatment was actually greater than the gains achieved during the acute 6-week treatment phase.

When the present results are compared to those from other studies using the standard 12-week CBT protocol for SAD, an interesting pattern emerges. At the immediate posttreatment assessment, the present protocol produced only modest gains relative to standard CBT. That is, after 6 weeks of treatment, participants in the present study did not achieve the same level of gains as did those who received 12 weeks of treatment in other studies. When one compares the results at the same point in time, however (i.e., at 12 weeks after commencing treatment), the two treatments produced almost identical effects. This suggests that an intensive 6-week version of CBT may produce the same long-term results as the longer 12-week protocol. Furthermore, the gains in the present study were maintained with no deterioration on any measures for 3 months following termination of treatment. Although this study was not designed to elucidate specific causative factors, the results are consistent with the idea that participants acquired skills and motivation during the acute treatment phase that they were able to continue applying successfully on their own during the weeks immediately following treatment. It is possible that the addition of SST to the CBT protocol may have contributed to the overall efficacy of the treatment protocol. Although the role of social skill deficits in SAD and the additive effects of SST over exposure alone in the treatment of SAD remain controversial (Hofmann, 2000), a recent study by van Dam-Baggen and Kraaimaat (2000) found that SST was actually more effective than CBT for gen-

eralized SAD. The unique and combined effects of exposure, cognitive restructuring, and SST in the treatment of SAD clearly warrant further research.

Despite the promise of these results, there are several limitations of this study that suggest caution in interpretation. Most importantly, we did not directly compare the 6-week and 12-week CBT protocols in the context of the same study, nor did we include a control for potential extra-therapy effects such as statistical regression toward the mean or spontaneous remission. The limited study design leaves open the possibility that the gains observed were not due to the intervention per se, and precludes definitive statements regarding the relative efficacy of the two protocols. Other limitations include the small sample size, especially at the follow-up assessment points, the lack of behavioral assessment data at follow-up, and the limited follow-up period of 3 months. The relatively small follow-up sample sizes may be because of difficulty tracking some participants following treatment completion (inadequate information on their whereabouts), as well as the lack of remuneration for completion of the follow-up assessments. Although it is possible that the more highly motivated and successful treatment participants were more likely to participate in the follow-up assessments, the results of the intent-to-treat analyses described above argue against this pattern. These limitations can only be fully addressed, of course, by a larger-scale direct comparison of the two treatments.

Despite these limitations, our confidence in these results is bolstered by several facts. First, generalized SAD is well known to follow a chronic, unremitting course without treatment, and several studies have documented no improvements for participants in wait-list conditions. For example, Reich, Goldenberg, Vasile, Goisman, and Keller (1994) found very low remission rates (.11 for full remission) over the course of 65 weeks. Our multimodal assessment methodology had several strengths, including behavioral assessment data coded by assessors who were blind to assessment occasion, and the use of postal self-

report measures for the follow-up assessments to reduce demand characteristics. In addition, in our prior experience with the standard 12-week CBGT protocol (e.g., Foa, Franklin, Perry, & Herbert, 1996; Hope, Herbert, & White, 1995), we have obtained treatment results consistent with those found by Heimberg and colleagues (e.g., Heimberg et al., 1990; Heimberg et al., 1998), suggesting that the present results are unlikely to be due to uniquely effective aspects of our treatment program.

An extension of this study using a larger sample size in the context of a direct comparison group would permit an evaluation of potential predictors of which individuals would benefit from this abbreviated program, and which require more extensive treatment. Indeed, our group is currently pursuing this line of investigation. In this vein, it is noteworthy that there is considerable variability in treatment response to all effective treatments for SAD, and some individuals will undoubtedly require a longer course of treatment than others to maximize therapeutic gains. Even if replicated, these results should not be taken to imply that all persons with generalized SAD require only 6 sessions of treatment. Nevertheless, it appears that the present brief but intensive treatment program may substantially benefit many individuals with this chronic and debilitating disorder.

References

- Ballenger, J. C., Davidson, J. R. T., Lecrubier, Y., Nutt, D. J., Bobes, J., Beidel, D. C., Ono, Y., & Westenberg, H. G. M. (1998). Consensus statement on social anxiety disorder from the International Consensus Group on Depression and Anxiety. *Journal of Clinical Psychiatry*, 59, 54–60.
- Beck, A. T., Steer, R. A., & Garbin, R. A. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, 8, 77–100.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561–571.
- Beidel, D. C., Borden, J. W., Turner, S. M., & Jacob, R. G. (1989). The Social Phobia and Anxiety Inventory: Concurrent validity with a clinic sample. *Behaviour Research and Therapy*, 27, 573–576.
- Beidel, D. C., Turner, S. M., Stanley, M. A., & Dancu, C. V. (1989). The Social Phobia and Anxiety Inventory: Concurrent and external validity. *Behavior Therapy*, 20, 417–427.
- Brown, T. A., Di Nardo, P. A., & Barlow, D. H. (1994). *Anxiety disorders Interview Schedule for DSM-IV (ADIS-IV)*. Albany, NY: Graywind.
- Cox, B. J., Parker, J. D. A., & Swinson, R. P. (1996). Confirmatory factor analysis of the Fear Questionnaire with social phobia patients. *British Journal of Psychiatry*, 168, 497–499.
- Cox, B. J., Swinson, R. P., & Parker, J. D. A. (1993). Confirmatory factor analysis of the Fear Questionnaire in panic disorder with agoraphobia. *Psychological Assessment*, 5, 235–237.
- Cox, B. J., Swinson, R. P., & Shaw, B. F. (1991). Value of the Fear Questionnaire in differentiating agoraphobia and social phobia. *British Journal of Psychiatry*, 159, 842–845.
- Craske, M. G. (1999). *Anxiety disorders: Psychological approaches to theory and treatment*. Boulder, CO: Westview Press.
- Davidson, J. R. T. (1998). Pharmacotherapy of social anxiety disorder. *Journal of Clinical Psychiatry*, 59, 47–53.
- Davidson, J. R. T. (2000). Social anxiety disorder under scrutiny. *Depression and Anxiety*, 11, 93–98.
- Davidson, J. R. T., Potts, N. L. S., Richichi, E. A., Krishnan, R. R., Ford, S. M., Smith, R. D., & Wilson, W. (1993). The treatment of social phobia with clonazepam and placebo. *Journal of Clinical Psychopharmacology*, 13, 423–428.
- DiGiuseppe, R., McGowan, L., Sutton-Simon, K., & Gardner, F. (1990). A comparative outcome study of four cognitive therapies in the treatment of social anxiety. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, 8, 129–146.
- Emmelkamp, P. M., Mersch, P. P., Vissia, E., & van der Helm, M. (1985). Social phobia: A comparative evaluation of cognitive and behavioral interventions. *Behaviour Research and Therapy*, 23, 365–369.
- Fava, G. A., Grandi, S., & Canestrari, R. (1989). Treatment of social phobia by homework exposure. *Psychotherapy and Psychosomatics*, 52, 209–213.
- Feske, U., & Chambless, D. L. (1995). Cognitive behavioral versus exposure only treatment for social phobia: A meta-analysis. *Behavior Therapy*, 26, 695–720.
- First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (1994). *Structured Clinical Interview for Axis I DSM-IV Disorders—Patient Edition*. New York: New York State Psychiatric Institute Biometrics Research Department.
- Foa, E. B., Franklin, M. E., Perry, K. J., & Herbert, J. D. (1996). Cognitive biases in generalized social phobia. *Journal of Abnormal Psychology*, 105, 433–439.
- Gelertner, C. S., Uhde, T. W., Cimbalic, P., Arnkoff, D. B., Vittone, B. J., Tancer, M. E., & Bartko, J. J. (1991). Cognitive-behavioral and pharmacological treatment for social phobia: A controlled study. *Archives of General Psychiatry*, 48, 938–945.
- Glass, C. R., & Arnkoff, D. B. (1989). Behavioral assessment of social anxiety and social phobia. *Clinical Psychology Review*, 9, 75–90.
- Gould, R. A., Buckminster, S., Pollack, M. H., Otto, M. W., & Yap, L. (1997). Cognitive-behavioral and pharmacological treatment for social phobia: A meta-analysis. *Clinical Psychology: Science and Practice*, 4, 291–306.
- Greist, J. H., Kobak, K., Jefferson, J. W., Katzelnick, D. J., & Chene, R. L. (1995). The clinical interview. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 185–201). New York: Guilford Press.
- Heimberg, R. G. (1991). *Cognitive-behavioral group therapy for social phobia: A treatment manual*. Unpublished manuscript, The University at Albany, State University of New York.
- Heimberg, R. G., & Becker, R. E. (in press). *Cognitive-behavioral treatment for social phobia: Basic mechanisms and clinical strategies*. New York: Guilford Press.
- Heimberg, R. G., Becker, R. E., Goldfinger, K., & Vermilyea, J. A. (1985). Treatment of social phobia by exposure, cognitive restructuring, and homework assignments. *Journal of Nervous and Mental Disease*, 173, 236–245.
- Heimberg, R. G., Dodge, C. S., Hope, D. A., Kennedy, C. R., Zollo, L. J., & Becker, R. E. (1990). Cognitive-behavioral group treatment for social phobia: Comparison with a credible placebo control. *Cognitive Therapy and Research*, 14, 1–23.
- Heimberg, R. G., & Juster, H. R. (1995). Cognitive-behavioral treatments: Literature review. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 261–309). New York: Guilford Press.
- Heimberg, R. G., Liebowitz, M. R., Hope, D. A., Schneier, F. R., Holt, C. S., Welkowitz, L. A., Juster, H. R., Campeas, R., Bruch, M. A., Cloitre, M., Fallon, B., & Klein, D. F. (1998). Cognitive behavioral group therapy vs. phenelzine therapy for social phobia: 12-week outcome. *Archives of General Psychiatry*, 55, 1133–1141.
- Herbert, J. D., Bellack, A. S., & Hope, D. A. (1991). Concurrent validity of the Social Phobia and Anxiety Inventory. *Journal of Psychopathology and Behavioral Assessment*, 14, 357–368.
- Herbert, J. D., Rheingold, A. A., & Brandsma, L. L. (2000). Assessment of social anxiety. In S. G. Hofmann & P. M. DiBartolo (Eds.), *From social anxiety to social phobia: Multiple perspectives*. Boston: Allyn & Bacon.
- Hofmann, S. G. (2000). Treatment of social phobia: Potential moderators and mediators. *Clinical Psychology: Science and Practice*, 7, 3–16.
- Hope, D. A., Herbert, J. D., & White, C. (1995). Diagnostic subtype, avoidant personality disorder, and efficacy of cognitive behavioral

- group therapy for social phobia. *Cognitive Therapy and Research*, 19, 285–303.
- Jerremalm, A., Jansson, L., & Öst, L. G. (1986). Cognitive and physiological reactivity and the effects of different behavioral methods in the treatment of social phobia. *Behaviour Research and Therapy*, 24, 171–180.
- Lépine, J. P., & Pelissolo, A. (2000). Why take social anxiety disorder seriously? *Depression and Anxiety*, 11, 87–92.
- Liebowitz, M. R. (1987). Social phobia. *Modern Problems in Pharmacopsychiatry*, 22, 141–173.
- Liebowitz, M. R., Gorman, J. M., Fyer, A. J., Campeas, R., Levin, A. P., Sandberg, D., Hollander, E., Papp, L., & Goetz, D. (1988). Pharmacotherapy of social phobia: An interim report of a placebo-controlled comparison of phenelzine and atenolol. *Journal of Clinical Psychiatry*, 49, 252–257.
- Lydiard, R. B., Brawman-Mintzer, O., & Ballenger, J. C. (1996). Recent developments in the psychopharmacology of anxiety disorders. *Journal of Consulting and Clinical Psychology*, 64, 660–668.
- Marks, I. M., & Mathews, A. M. (1979). Brief standard rating for phobic patients. *Behaviour Research and Therapy*, 17, 263–267.
- Magee, W. J., Eaton, W. W., Wittchen, H. U., McGonagle, K. A., & Kessler, R. C. (1996). Agoraphobia, simple phobia, and social phobia in the National Comorbidity Survey. *Archives of General Psychiatry*, 53, 159–168.
- Mattick, R. P., & Peters, L. (1988). Treatment of severe social phobia: Effects of guided exposure with and without cognitive restructuring. *Journal of Consulting and Clinical Psychology*, 56, 251–260.
- McNeil, D. W., Ries, B. J., & Turk, C. L. (1995). Behavioral assessment: Self-report, physiology, and overt behavior. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 202–231). New York: Guilford Press.
- Michelson, L., & Mavissakalian, M. (1983). Temporal stability of self report measures in agoraphobia research. *Behaviour Research and Therapy*, 21, 695–698.
- Norton, G. R., McLeod, L., Guertin, J., Hewitt, P. L., Walker, J. R., & Stein, M. B. (1996). Panic disorder or social phobia: Which is worse? *Behaviour Research and Therapy*, 34, 273–276.
- Oei, T. P. S., Moylan, A., & Evans, L. (1991). Validity and clinical utility of the Fear Questionnaire for anxiety-disorder patients. *Psychological Assessment*, 3, 391–397.
- Öst, L.-G. (1989). One-session treatment for specific phobias. *Behaviour Research and Therapy*, 27, 1–7.
- Öst, L. G., Jerremalm, A., & Johansson, J. (1981). Individual response patterns and the effects of different behavioral methods in the treatment of social phobia. *Behaviour Research and Therapy*, 19, 1–16.
- Rapee, R. M. (1995). Descriptive psychopathology of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 41–66). New York: Guilford Press.
- Reich, J., Goldenberg, I., Vasile, R., Goisman, R., & Keller, M. (1994). A prospective follow-along study of the course of social phobia. *Psychiatry Research*, 54, 249–258.
- Reich, J., & Yates, W. (1988). A pilot study of treatment of social phobia with alprazolam. *American Journal of Psychiatry*, 145, 590–594.
- Schneier, F. R., Johnson, J., Hornig, C. D., Liebowitz, M. R., & Weissman, M. M. (1992). Social phobia: Comorbidity and morbidity in an epidemiologic sample. *Archives of General Psychiatry*, 49, 282–288.
- Stravynski, A., Marks, I., & Yule, W. (1982). Social skills problems in neurotic outpatients: Social skills training with and without cognitive modification. *Archives of General Psychiatry*, 39, 1378–1385.
- Taylor, S. (1996). Meta-analysis of cognitive-behavioral treatments for social phobia. *Journal of Behavior Therapy and Experimental Psychiatry*, 27, 1–9.
- Turner, S. M., Beidel, D. C., Borden, J. W., Stanley, M. A., & Jacob, R. G. (1991). Social phobia: Axis I and II correlates. *Journal of Abnormal Psychology*, 100, 102–106.
- Turner, S. M., Beidel, D. C., Cooley, M. R., Woody, S. R., & Messner, S. C. (1994). A multicomponent behavioral treatment for social phobia: Social effectiveness therapy. *Behaviour Research and Therapy*, 32, 381–390.
- Turner, S. M., Beidel, D. C., Dancu, C. V., & Stanley, M. A. (1989). An empirically derived inventory to measure social fears and anxiety: The social phobia and anxiety inventory. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, 1, 35–40.
- Van Dam-Baggen, R., & Kraaimaat, F. W. (2000). Group social skills training or cognitive group therapy as the clinical treatment of choice for generalized social phobia? *Journal of Anxiety Disorders*, 14, 437–451.
- Van Zuuren, F. J. (1988). The Fear Questionnaire: Some data on validity, reliability, and layout. *British Journal of Psychiatry*, 153, 659–662.
- Walker, J. R., & Kjernisted, K. D. (2000). Fear: The impact and treatment of social phobia. *Journal of Psychopharmacology*, 14, 13–23.
- Wittchen, H. U., Fuetsch, M., Sonntag, H., Müller, N., & Liebowitz, M. (1999). Disability and quality of life in pure and comorbid social phobia: Findings from a controlled study. *European Psychiatry*, 15, 46–58.
- Wittchen, H. U., Stein, M. B., & Kessler, R. C. (1999). Social fears and social phobia in a community sample of adolescents and young adults: Prevalence, risk factors and co-morbidity. *Psychological Medicine*, 29, 309–323.
- Wlazole, Z., Schroeder-Hartwig, K., Hand, I., Kaiser, G., & Münchau, N. (1990). Exposure in vivo vs. social skills training for social phobia: Long-term outcome and differential effects. *Behaviour Research and Therapy*, 28, 181–193.
- Wolpe, J., & Lazarus, A. A. (1966). *Behaviour therapy techniques*. New York: Pergamon.

This research was supported in part by Grant No. 5 R01 MH052232 from the National Institute of Mental Health.

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Received: January 10, 2001

Accepted: March 9, 2001

