The Efficacy of Bibliotherapy for Social Phobia

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This study investigated the efficacy of bibliotherapy (BT) in the treatment of social phobia. Thirty-eight subjects who met the diagnostic criteria for social phobia were randomly assigned to one of three conditions: bibliotherapy with feedback (BT 1), bibliotherapy without feedback (BT 2), and a waiting-list (WL) control condition. Before and after treatment, the Social Phobia Scale (SPS) and Social Interaction Anxiety Scale (SIAS), two of the most widely and consistently used measures of social anxiety, were administered. Those individuals in the BT 1 and BT 2 groups exhibited significant reductions from pre-to posttreatment on the SPS relative to the WL group but not on the SIAS. In addition, there were more individuals who showed a clinically significant improvement (CSI) in the BT 1 and BT 2 groups than in the WL group. However, there were no significant differences between the BT 1 and BT 2 groups. After the BT, 16 of the 38 participants received cognitive–behavioral group treatment (CBGT). After CBGT, those participants who had received BT and shown a CSI exhibited a significantly higher reduction on the SPS than both those participants who had received BT but did not show a CSI and the WL group. The implications for future research are discussed. [Brief Treatment and Crisis Intervention 8:390–401 (2009)]

KEY WORDS: social phobia, self-help, bibliotherapy.

Social phobia is associated with a substantial impairment in quality of life and psychological functioning. Individuals with social phobia display high levels of psychological distress and report impaired social and role performances (Stein & Kean, 2001; Stein, Torgrud, & Walker, 2000). It has recently been shown that there are more individuals who suffer from social phobia in Korea than was previously thought. Cho and Won (1997) demonstrated that 54.9% (interview situations) to 24.7% (social meetings) of college students showed a moderate level of social anxiety. In another study, Lee, Shin, and Oh (1994) reported that 4.5% of outpatients who came for treatment had suffered from social phobic symptoms or social phobia according to the data collected for 10 years by the Koryo Medical School Department of Psychiatry located in Seoul.

The effectiveness of cognitive–behavioral therapy (CBT) for the treatment of social phobia has been well established (Heimberg & Juster, 1994) and has also been confirmed in Korea (Lee & Choi, 1997b; Park & Ahn, 2001). Despite the robust evidence for the effectiveness of CBT, the service delivery of such interventions is often poor in terms of access and availability. Individuals with social phobia find it very
difficult to seek professional help and show up for their appointments due to their fear of meeting someone new or their tendency to avoid social situations (Newman, Erickson, Przeworski, & Dzus, 2003). In one report, it was demonstrated that only about one third of those with social anxiety disorders received any kind of psychotherapy (Erwin, Turk, Heimberg, Fresco, & Hantula, 2004). Therefore, one of the clinical issues which need to be dealt with in the treatment of social phobia is to increase the accessibility and affordability of evidence-based psychological treatments.

Moreover, the availability of CBT has been limited by its cost and the lack of trained practitioners. Access to CBT is characterized by long waiting lists (WLs), due in part to a lack of sufficiently trained therapists, which is compounded by traditional working practices; CBT requires extensive training of therapists and should be delivered on a weekly basis in 10–20 sessions of 45–60 min. Consequently, there do not appear to be enough suitably trained professionals to provide all the CBT being demanded in Western countries (Lovell & Richards, 2000; Marks et al., 2003), not to mention in countries like Korea. Bebbington, Marsden, and Brewin (1999) suggested that 80% of people with anxiety disorders, who could be treated using CBT, go untreated. This problem is even more pronounced in countries with a short history of CBT.

Many attempts have been made to modify CBT so as to develop more efficient, cost-effective, and affordable treatments. One of these modifications comprises the use of self-help books or BT. The definition of BT is the use of written materials or audio/videotapes for the purpose of gaining understanding or solving problems relevant to a person’s developmental or therapeutic needs (Craighead, McNamara, & Horan, 1984; Marrs, 1995; Schrank & Engels, 1981; Smith & Burkhalter, 1987). Because BT is relatively easy to administer and does not require substantial resources, clinical practitioners have used treatment-related materials in written (e.g., self-help books) and audiotaped format as a useful alternative therapeutic method for years. According to a survey conducted by Adams and Pitre (2000), 68% of therapists used BT with their clients. In addition, these therapists reported that BT was beneficial for strengthening traditional therapy and fostering client independence. To date, with a substantial number of people using the World Wide Web (Ritterband, Gonder Frederick, Cox, Clifton, West, & Borowitz, 2003), computers can be an alternative to self-help manuals for other conditions (Andersson, Strömgren, Ström, & Lyttkens, 2002; Lange, van den Ven, Schrieken, & Emmelkamp, 2001; Ström, Pettersson, & Andersson, 2000).

Although many professionals have used BT for various disorders, there has been a lack of empirical investigations designed to demonstrate the efficacy of self-help treatments (Adams & Pitre, 2000; Newman, Erickson, Przeworski, & Dzus, 2003; Reeves & Stace, 2005; Rosen, Glasgow, & Moore, 2003; Van Boeijen et al., 2005). Recently, BT has been increasingly and successfully used for the treatment of several conditions, including panic disorder/agoraphobia (Lidren et al., 1994), obsessive-compulsive disorder (Lovell, Ekers, Fulford, Baguley, & Bradshaw, 2004), depression (Mckendree-Smith, Floyd, & Scogin, 2003), and insomnia (Mimeault & Morin, 1999). Recent meta-analyses have shown that BT or self-help treatments are particularly effective for anxiety disorder (Gould & Clum, 1993; Marrs, 1995). Such studies have revealed that BT and other self-administered interventions have a medium to large effect size ($d = .74$), particularly in the treatment of anxiety disorders. Moreover, some studies suggest that the effectiveness of BT and other self-administered interventions is comparable to that of therapist-administered interventions (Gould & Clum, 1993; Marrs, 1995). These findings indicate that BT in the form
of independent interventions may be useful for the treatment of anxiety.

As far as is known, very few studies have been conducted to investigate the treatment of social phobia with BT interventions (Gruber, Moran, Roth, & Taylor, 2001; Salaberría & Echeburúa, 1998). Gruber, Moran, Roth, and Taylor (2001) investigated the usefulness of a hand-held computer as a therapeutic adjunct to cognitive–behavioral group treatment (CBGT) for social phobia. Salaberría and Echeburúa (1998) used a self-help manual for the management of anxiety as an adjunct to self-exposure intervention. These studies used a hand-held computer or self-help manual as an adjunct to the traditional CBT. Therefore, the efficacy of BT as the sole therapeutic method for social phobia, for which there is a great demand, has not been tested.

The purpose of this study was to examine the efficacy of BT for the treatment of social phobia using a Korean community sample. The question was also addressed as to whether providing feedback via e-mail would increase the efficacy of BT. The following hypotheses were advanced: (a) the participants in the bibliotherapy with feedback (BT 1) condition and bibliotherapy without feedback (BT 2) condition would improve significantly more than those in the WL control group and (b) the participants in the BT 1 condition would improve significantly more than those in the BT 2 condition on dependent measures.

Methods

Participants

Potential participants were recruited from a WL of people who had wanted to participate in CBGT at Korea University Social Phobia Counseling Center (http://www.koreauniv-socialphobia.com). The subjects were selected through an individual face-to-face clinical interview using the Korean version of the Anxiety Disorders Interview Schedule for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) (ADIS-IV) (Di Nardo, Brown, & Barlow, 1994), a semi-structured interview that assesses social phobia according to DSM-IV criteria. The Korean version of the ADIS-IV has been widely used in Korea and shown to have good interrater reliability (Lee & Choi, 1997a). Diagnostic interviews were conducted by graduate clinical psychology students trained in the use of ADIS-IV, and its protocols were discussed to make the final diagnostic decision among the therapy team. No interrater reliability data for the ADIS-IV were collected from the study sample. However, an earlier study from our clinic that used the identical training and administration procedure showed high interrater reliability for diagnosing social phobia (Chung & Kwon, 2006). People who suffered from other psychiatric disorders and were in immediate need of treatment were excluded. The participants were randomly assigned to one of three groups: the BT 1 group, the BT 2 group, and the WL control group. A total of 45 participants were initially assigned to the three groups. Of these 45 participants, 38 completed the study, whereas the remaining 7 participants (two in BT 1, one in BT 2, and four in WL) dropped out. The treatment attrition rate from BT 1, BT 2, and the WL group were 13%, 8%, and 22%, respectively. The three groups did not differ in their attrition rate, \( \chi^2(2, N = 45) = 1.14, ns \). Sixty-six percent of the present sample met criteria for the generalized subtype of social phobia. The proportion of participants with generalized social phobia in BT 1, BT 2, and the WL group was 69%, 55%, and 71%, respectively. It was equally distributed across the three groups, \( \chi^2(2, N = 38) = .88, ns \). The demographic data are presented in Table 1.

Of the 38 participants who completed the BT study, 26 participated in the CBGT and 12 did
not. Among these 12 subjects, 5 (42%) showed an improvement on the Social Phobia Scale (SPS) after BT and no longer felt the need to do therapy and the other 7 participants did not want to participate in the CBGT for various reasons (e.g., moved to other location, had conflicts in schedules, etc.). Of the 26 subjects who participated in the CBGT, 8 (31%) dropped out during the course of the CBGT. Therefore, the number of participants who completed the CBGT was 18. However, one participant in the BT clinically significant improvement (CSI) group and one in the BT NCSI (those who did not show a clinically significant improvement) group did not complete the questionnaire after the CBGT, which resulted in a total of 16 subjects in the analysis.

**Measures**

**The Korean Version of the SPS.** The SPS is a 20-item measure employing a 0–4 Likert-type scale (Kim, 2001; Mattick & Clarke, 1998). The items pertain to social anxiety when performing specific tasks in the presence of other people and scrutiny by others in general (e.g., writing or eating in view of other people; being looked at by others). The scores range from 0 to 80, with higher totals reflecting greater anxiety. In the current study, the Korean version of the SPS translated by Kim (2001) was used. This translated version has already been successfully used in several studies, indicating that the scale is reliable and valid with high internal consistency (Cronbach’s $\alpha = .92$) and high test–retest reliability coefficients ($r = .91$) (Cho & Oh, 2003; Kim, 2001). The SIAS and SPS are typically administered together and have been conceptualized as subscales of a larger social anxiety measure (Brown et al., 1997).

**The Korean Version of the Social Interaction Anxiety Scale.** The Social Interaction Anxiety Scale (SIAS) consists of 19-items regarding anxiety during various social interaction situations (e.g., talking with others, meeting people at parties), each rated on a 5-point Likert scale, with higher scores reflecting greater anxiety (Kim, 2001; Mattick & Clarke, 1998). In the current study, the Korean version of the SIAS translated by Kim (2001) was used. Overall, research on this scale has indicated that it is reliable and valid with high internal consistency (Cronbach’s $\alpha = .92$) and with a high test–retest reliability coefficient being observed over a 4-week period ($r = .92$) (Cho & Oh, 2003; Kim, 2001). The SIAS and SPS are typically administered together and have been conceptualized as subscales of a larger social anxiety measure (Brown et al., 1997).
**Procedure**

**Bibliotherapy.** The subjects in BT 1 and BT 2 groups read the same book for about 6 weeks, *Too much shyness: A cognitive therapy for social phobia*, a CBT manual which was written in Korean by Kwon, Cho, and Lee (1998). This book consists of two main parts: the first part consists of six chapters which deal with changing dysfunctional thinking and the second part contains two chapters concerning exposure training. The first chapter provides general information about social phobia, including its clinical features, diagnostic criteria, and life prevalence. The etiology of social phobia and cognitive conceptualization is explained in the second chapter. The third and fourth chapters describe how to monitor social anxiety and record events in the Social Anxiety Record Form, in which there are columns for the date, specific social situation, the severity of anxiety (from 0 to 8 points), automatic thoughts, and behaviors. The fifth and sixth chapters focus on identifying cognitive biases (e.g., catastrophic thinking) and changing dysfunctional beliefs. The seventh chapter serves to identify one’s underlying core beliefs and modify them. The eighth and ninth chapters introduce the reader to exposure techniques. The tenth chapter helps the reader to review what he or she has learned about controlling their social anxiety, preparing for the possible reappearance of symptoms, and becoming their own therapists.

The BT 1 group did their homework weekly, which was based on the contents of the book, and received feedback about their homework via e-mail from the first author. Through e-mail, they had the opportunity to correct their cognitive bias in order to make their thinking more realistic. Moreover, the BT 1 group could contact the therapist via e-mail whenever they had a question about the homework. It took about 5 weeks to finish the BT.

On the other hand, the BT 2 group just read the book for about 6 weeks without any feedbacks and were then debriefed with a semi-structured interview, in order to determine if they had correctly understood the content of the book at the end of the BT. For the WL group, neither reading the book nor feedback via e-mail was provided.

Before and after the period of BT, all the participants completed two self-report measures of social anxiety: the SPS and the SIAS.

**The Cognitive-Behavioral Group Treatment.**

The CBGT was based on the empirically validated cognitive–behavioral programs, which comprised cognitive restructuring and exposure (Heimberg & Juster, 1994). The CBGT consisted of eight 90-min sessions held on a weekly basis. The treatment group consisted of seven to eight participants. The initial session was devoted to education about social phobia. The participants were taught to recognize the cognitive, behavioral, and physiological aspects of social anxiety. From the second to the fourth session, the participants were introduced to basic cognitive techniques (i.e., identifying and modifying negative self-talk).

The remaining four sessions consisted of exposure training. In the fifth session, the participants were introduced to the notion of exposure exercises, with the therapists demonstrating possible scenarios and drawing attention to cognitive, behavioral, and physiological experiences. The remaining two sessions focused on in-group exercises. The weekly homework of the participants was reviewed and discussed at the beginning of each session. Each group member participated in at least one of their own exposure exercises at each of these sessions, as well as those of other group members. The last session dealt with how the participants could become their own therapists and how they could consolidate the benefits of the program.
During the course of the CBGT, homework was assigned at the close of each session and discussed at the beginning of the next session. This homework included a daily diary in which the participants recorded their anxiety-provoking situations and associated thoughts. After the CBGT, all the participants completed two self-reporting measures of social anxiety: the SPS and the SIAS.

Results

Table 1 summarizes the descriptive statistics on the selective demographic and clinical characteristics of the 38 participants who completed the BT intervention study.

Mixed design analyses of variance (ANOVAs) were conducted to test the hypotheses, with subsequent one-way ANOVAs being used to study significant interactive effects. To perform the group comparisons, post hoc Tukey tests were used in order to reduce the risks of Type 1 errors. All analyses were performed using SPSS for Windows, version 12.

Effects of Bibliotherapy

To determine whether the randomization to conditions had been successful, the demographic data of the participants in the three groups (i.e., BT 1, BT 2, and WL group) were compared (i.e., age and education). No group differences were found. The results are shown in Table 1.

In order to investigate the efficacy of the BT, pre- and posttreatment outcome measures were examined through Group (BT 1, BT 2, WL) × Time (pre-, posttreatment) mixed-model repeated-measures ANOVA. Table 2 summarizes the group comparisons on all of the dependent measures. For SIAS, a repeated-measures ANOVA indicated that there was a significant main effect for group. However, there was neither a significant main effect for Time nor for the Group × Time interaction. On the other hand, for SPS, there was significant main effect for Time as well as for the Group × Time interaction (see Figure 1). The post hoc by paired samples t-tests for group showed a significant decrease in the SPS score over time in the BT 1 and BT 2 groups, \( t = 2.14, p < .05; t = 3.75, p < .01 \), respectively, but not in the WL control group, \( t = -.35, ns \). The post hoc analyses with Tukey showed that there was no significant difference between the BT 1 and BT 2 groups and that the scores on SPS and SIAS were significantly lower in both BT groups, \( t = -8.80, p < .05; t = -7.45, \)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Group</th>
<th>Pre</th>
<th>Post</th>
<th>Main effect</th>
<th>Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Time F (1, 35)</td>
<td>Group F (1, 35)</td>
<td>Time × Group F (1, 35)</td>
<td></td>
</tr>
<tr>
<td>SIAS</td>
<td>BT 1</td>
<td>49.62 (8.26)</td>
<td>45.77 (9.33)</td>
<td>3.29</td>
<td>3.50*</td>
</tr>
<tr>
<td></td>
<td>BT 2</td>
<td>52.45 (8.42)</td>
<td>50.73 (9.33)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WL</td>
<td>55.86 (5.61)</td>
<td>54.43 (8.64)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>52.74 (7.71)</td>
<td>50.39 (9.58)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPS</td>
<td>BT 1</td>
<td>49.23 (9.99)</td>
<td>41.77 (16.18)</td>
<td>12.07***</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>BT 2</td>
<td>45.20 (14.28)</td>
<td>35.50 (13.39)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WL</td>
<td>44.57 (12.15)</td>
<td>45.21 (13.57)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>46.38 (11.92)</td>
<td>41.79 (14.66)</td>
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</tbody>
</table>

*p < .05. ***p < .001.
Clinically Significant Improvement After Bibliotherapy

To determine whether the differences between the BT groups (BT 1 and BT 2) and the WL group were clinically significant, an arbitrary criterion of CSI was examined, namely a decrease of at least 20% from pre- to post-BT on the SIAS and SPS (Mattick & Clarke, 1998). This criterion was made by reference to studies by Turner, Beidel, and Wolff (1994) and Park and Ahn (2001).

The change in the proportion of participants who met the criteria for a CSI post-BT for each condition is presented in Table 3. The analysis of the CSI was examined using Fisher’s exact probability test. With regards to the SIAS and SPS status posttreatment, the analysis revealed that more participants in the BT conditions (i.e., BT 1 and BT 2) demonstrated CSIs than those in the WL control condition on the SPS, $\chi^2(1, N = 38) = 5.12, p < .05$. However, there was no clinically significant difference between the BT conditions and the WL condition on the SIAS, $\chi^2(1, N = 38) = .27, ns$.

Did Bibliotherapy Enhance CBGT?

To investigate whether the participants who received CBGT after BT (BT + CBGT) would improve significantly more than those who received CBGT without BT (WL + CBGT), a 2 (group: BT+CBGT, WL+CBGT) × 2 (time: post-BT, post-CBGT) repeated-measures ANOVA was performed. There was only significant time effect, $F(1, 14) = 21.04, p < .001$ on the SPS and $F(1, 14) = 19.77, p < .001$ on the SIAS, and neither significant group effect nor significant group × time interaction. To investigate whether those participants who manifested a CSI after BT benefited more from the CBGT than the participants in the WL group, we classified the 18 individuals who went on to participate in the CBGT after the completion of the BT period into three conditions, namely those who manifested a CSI after bibliotherapy, those who did not show a clinically significant improvement (NCSI) after bibliotherapy, irrespective of whether they were in BT 1 or BT 2, and those who were in the WL group. However, the analysis on the SIAS was not performed since there were very few who showed a CSI.

Analyses of the effects of the BT on the CBGT were conducted by using the scores on the SPS at post-CBGT. A 3 (condition: CSI, NCSI, WL) × 3 (time: pre-, post-BT, post-CBGT) repeated-measures ANOVA was performed in order to examine the main effects of condition and time and the interaction effect for the SPS. Table 4 shows the means and standard deviations (SDs) of the scores on the SPS for each condition at the three stages (pre-, post-BT, post-CBGT).

First, a repeated-measures ANOVA for the SPS demonstrated a significant interaction effect, $F(4, 26) = 3.31, p < .05$, and time effect,
TABLE 3. Participants Meeting Criteria for CSI at Post-BT

<table>
<thead>
<tr>
<th>Dependent Measures</th>
<th>BT 1</th>
<th>BT 2</th>
<th>WL</th>
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<tbody>
<tr>
<td>SIAS</td>
<td>2/13 (15.4%)</td>
<td>1/11 (9.1%)</td>
<td>1/14 (7.1%)</td>
</tr>
<tr>
<td>SPS</td>
<td>5/13 (38.5%)</td>
<td>5/11 (45.5%)</td>
<td>1/14 (7.1%)</td>
</tr>
</tbody>
</table>

Posttreatment compared to the WL group, they seemed to gain some benefits from BT. Furthermore, 39% to 46% of those in the BT condition exhibited a CSI. Those individuals who exhibited a CSI after the BT showed a further reduction on the SPS to the level of average adults after the CBGT. However, on the SIAS, there was no significant difference between the BT conditions and WL condition, which pointed to there being some limitations of the use of BT for the treatment of social phobia.

The question must be asked as to why the BT was effective in reducing the scores on the SPS but not on the SIAS? This may be partly due to the characteristics of our sample and partly due to the content of the BT. Although it is beyond the scope of this study to reach any definite conclusions, it is likely that our sample, and possibly Korean patients with social phobia in general, experience more difficulties in performance situations than in social interaction situations. As popular self-reporting measures of social anxiety (Mattick and Peters, 1988; Heimberg et al., 1997), the SIAS and SPS have been reported to assess specific domains of social fear. The SIAS was found to be correlated more highly with measures of interaction anxiety than with measures of performance anxiety (e.g., “I am nervous when mixing with people I don’t know very well” and “I have difficulty talking with other people”), whereas the SPS was found to be correlated only with measures of performance anxiety (e.g., “I feel conspicuous when standing in a line” and “When in an

TABLE 4. Pre-, Post-BT, and Post-CBGT Means and SDs for Each Condition on Social Phobic Scale

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-BT</th>
<th></th>
<th>Post-BT</th>
<th></th>
<th>Post-CBGT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>CSI (n = 3)</td>
<td>54.00</td>
<td>18.52</td>
<td>37.33</td>
<td>19.50</td>
<td>20.00</td>
<td>16.64</td>
</tr>
<tr>
<td>NCSI (n = 6)</td>
<td>47.50</td>
<td>5.89</td>
<td>45.17</td>
<td>9.37</td>
<td>36.67</td>
<td>12.06</td>
</tr>
<tr>
<td>WL (n = 7)</td>
<td>44.29</td>
<td>10.95</td>
<td>45.57</td>
<td>12.70</td>
<td>27.71</td>
<td>8.01</td>
</tr>
</tbody>
</table>

Note. All participants in this table received CBGT. Participants in the CSI and NCSI groups received bibliotherapy before CBGT.
In the present study, the total mean score on the SIAS was 52.74. Heimberg et al. (1992) reported that the mean score on the SIAS for socially phobic samples was 49.0 and the SD was 15.6. Accordingly, the mean score on the SIAS in the present sample is comparable to that on the SIAS for an American sample with social phobia. By contrast, the mean score on the SPS for our sample (mean $M = 46.38$, $SD = 11.92$) was approximately 1 SD higher than that of the American socially phobic sample ($M = 32.8$, $SD = 14.8$). A high score on the SPS was also observed in another study of a Korean sample with social phobia. Cho and Oh (2003) reported that the mean score on the SPS of a generalized social phobia sample was 51.69 ($SD = 17.79$). It seems that Korean adults with social phobia tend to have higher scores on the SPS than American adults with social phobia. Therefore, it needs to be further investigated in future studies whether Korean adults with social phobia have a higher level of fear of being observed by others than of interacting with other people in social situations.

Given that our sample had higher scores on the SPS than the American sample, but not on the SIAS, it is probable that the BT helped the participants deal mainly with their prominent symptoms, that is, with their performance anxiety. Another reason why the participants showed an improvement only on the SPS might come from the content of the BT. As described in the Methods section, the BT was done using a self-help book on social phobia. The content of this book dealt mainly with transforming dysfunctional thinking into realistic thinking rather than exposure training. Therefore, the participants lacked the opportunity to practice exposure training. Given most of the participants had a paucity of experiences in the social world, activation of mental representations of the social interaction situations relative to the social performance situations might have been harder to achieve, which has impeded a new learning in the social interaction situations to occur. In this respect, BT with an emphasis on cognitive restructuring would be expected to be more effective in dealing with performance anxiety or fear of being observed than in dealing with social interaction anxiety. Because we employed only two measures, however, this hypothesis remains to be tested in future studies. In future studies of BT, exposure training and cognitive restructuring should be dealt with on an equal basis, and their effects on social interaction anxiety should be investigated.

In this study, we attempted to investigate whether feedback via e-mail could increase the efficacy of BT. The results showed that there was no significant difference in the reduction of the anxiety symptoms between groups BT 1 and BT 2. In this study, those individuals in the BT 1 condition received feedback from the clinical psychologist via

![Figure 2](image-url)
e-mail. The feedback in the present study were minimal, being limited to prompts or reminders designed to increase the motivation of the participants to complete their weekly homework. Also, there were very few individuals who sent extra e-mails to make any enquiries or to ask questions in the BT with feedback condition. Other methods of enhancing BT need to be explored, such as contacting the participants by phone or holding self-help group meetings.

Although the findings of this study are preliminary because of the small number of subjects, the question as to whether BT could enhance CBGT was addressed. Both the BT participants and those in the WL condition showed improvement after the CBGT, indicating that there was no additional benefits of attending the BT before the CBGT. Interestingly, the slope of improvement for the WL group was similar to that of the CSI group, whereas the slope for the NCSI group was less steep than those of the other two groups. It is possible that prior exposure to the BT without much therapeutic benefit could obstruct the change process of the CBGT. However, this finding should be interpreted with great caution and be replicated with a larger sample.

In addition to those mentioned above, several other limitations of the present study should be noted. First, the sample size was too small to make any definite conclusions. Second, the ability to generalize the results of this study is limited because most of the participants were young adults (their mean age was 26.21 years) and their educational level was high (their mean length of education was 15.03 years). Therefore, it remains to be seen whether the results of this study can be generalized to older patients with less education. Third, the present study investigated the clinical improvement only on self-reporting measures (e.g., the Social Phobic Scale) due to a lack of resources. Turner, Beidel, and Wolff (1994) emphasized the need to examine several aspects of the improvement, including independent evaluator ratings and a behavioral performance task, as well as self-reporting measures.

Overall, the current study does not provide a strong support for the BT, but there were some individuals who gained some benefits from the BT. Future research should examine who is most likely to benefit from BT and what the predictors for treatment response are. Self-help remains a promising avenue to increase the accessibility of cognitive–behavioral intervention.

Taken together, these findings show preliminary promise for the BT in the treatment of social phobia. However, more research should be conducted before a definitive conclusion can be reached.

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