



Effectiveness of Cognitive-Behavior Group Therapy (CBGT) in Reducing Social Anxiety

Research Article

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Abstract : The purpose of the present study was to examine the effectiveness of cognitive-behavior group therapy in reducing the social anxiety among undergraduate students. To measure social anxiety, the Social Interaction Anxiety Scale (Jasmine and Deeba, 2017) was used. The sample was selected randomly in two stages: in the first stage, 600 (300 male, 300 female) students were assessed. In this stage, the number of high scorers in SIAS (61-80) was identified as having symptoms of social anxiety. In the second stage, total of 48 students with social anxiety were randomly assigned into two groups: 24 students (12 male, 12 female) in the experimental group and 24 students (12 male, 12 female) in the control group. Pre-post outcome design under quasi-experimental design was used in this experiment. In this research, intervention was implemented on experimental group, while the control group didn't receive such intervention. The obtained data were analyzed by independent sample t-test, paired sample t-test, one-way ANOVA. The findings of the study showed no significant differences in SIAS score of students according to gender and socio-economic status. But the result revealed significant difference ($t = 12.317, p < .01$) in SIAS scores between pre-test and post-test in experimental group. Results also revealed significant ($t = -11.954, p < .01$) difference in SIAS scores between experimental and control group. It indicated that cognitive-behavior group therapy was effective on experimental group. Finally, it may be recommended that cognitive-behavior group therapy can be used in controlling social anxiety for the undergraduate students.

Keywords: *Cognitive-behavior group therapy • social anxiety*

1. Introduction

Social anxiety is the intense fear and anxiety of being negatively judged and assessed by other people (Richard, 2018). It relates to discomfiture, fear or uneasiness about social interconnection and presentation. It is often feared that a person will be assessed negatively by others, regardless of whether this is actually the case. It is so disturbing, imprudent, or extensive that it is notably interfering with an individual's standard of life. The fear

or nervousness in social situation such as interacting, communicating, speaking, or performing to others is known as social interaction anxiety (Murphy, 2013). To reduce social anxiety, clinical psychologists use cognitive behavior therapy (Lindsay and Powell, 2007).

Cognitive behavior therapy is a psycho-social intervention that highlights three main components in understanding problems: behaviors, emotions and

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thoughts. By categorizing difficult feelings into these main component parts, it becomes very clear where and how to intervene. Cognitive-behavior group therapy (CBGT) works to sort out the vicious cycle social anxiety through in-session exposure to feared social situations, cognitive restructuring, and homework assignments (Heimberg and Becker, 2002).

The first systematic review and meta-analysis was conducted by Feske and Chambless (1995). They compared CBT to exposure for the treatment of social anxiety disorder (SAD). The efficacy of CBT versus waiting list controls was measured in 12 trials and exposure therapy compared to waiting list in 9 trials. Participants fulfilled DSM-III or DSM III-R criteria (APA, 1980; APA, 1987) for social phobia. The outcomes revealed that cognitive therapy with exposure produced similar effect sizes to exposure alone at pre / post and pre / follow-up on self-reporting measures of social phobia.

Taylor (1996) conducted a meta-analysis. The study aims to examine the effectiveness of CBT treatments for SAD where twenty-four studies were included. The study had the objective to ascertain whether waiting list and placebo were inferior to CBT; whether there were benefits in adding cognitive therapy to exposure; and improvements sustained at follow-up. Participants fulfilled the DSM-III to DSM-IV criteria (APA, 1980; APA, 1987; APA, 1994) for SAD. After the treatment, the effects of all CBT therapies exceeded in comparison to the control group from the waiting list. However, only cognitive therapy with exposure ($M = 1.06$, $SD = 0.34$) was greater effect than placebo ($M = 0.48$, $SD = 0.26$). All results increased from post-treatment to follow-up of all treatments with no significant differences among them. So, cognitive exposure therapy was the most effective form of treatment for SAD.

Rajkumar, Vinod, Subramanian and Karthikeyan (2015) conducted an experiment to measure the effectiveness of cognitive behavior therapy among childhood social anxiety disorder. A total of 30 different participants (15 in experimental group and 15 in control group) of age group 7 to 15 years with social anxiety participated in the study. Cognitive behavior therapy was applied on experimental group. They found that the cognitive behavior therapy techniques had a significant effect in reducing social anxiety among children. Therefore, it can be concluded from previous studies that the cognitive-behavior treatment will have considerable influence in group process in reducing social anxiety and increasing social capability.

Rationale of the Study

A meta-analysis conducted by Olatunji et al. (2007) indicates that constant social anxiety of people can

considerably impair their psychological functioning and quality of life. It has been observed that socially anxious people judge their abilities poorly (Austin, 2004) while participating in a seminar or presentation although relatively more positive assessment of spectators (Strahan, 1998). Such threat of unfavorable social evaluation endures despite academic achievement. If treatment is not meted out, 2/3rd of individuals will fail to experience remission of social anxiety within 10 years (Keller, 2006). So, it is very important to reduce social anxiety. But there is no such research conducted on universities students in Bangladesh. Therefore, it is required to assess the level of social anxiety among the university students, which is responsible for the problems cited above. With the help of cognitive behavior group therapy, such social anxiety can be addressed. The finding can also help mental health professionals for easily identification and providing services for early reduction of symptoms of social anxiety.

Objectives

The main objective of the study was to look into the effectiveness of cognitive-behavior group therapy (CBGT) in reducing the social anxiety. The specific objectives were:

1. To investigate whether there is any difference in social anxiety among students in terms of gender.
2. To explore whether social anxiety varies with socio-economic status of the students.
3. To investigate the effect of cognitive behavior group therapy in reducing social anxiety among students.

2. Materials and Methods

2.1 Sample and Sampling Techniques

The population consisted of all undergraduate students of Jagannath University. To select the participants and to divide them into two groups, simple random sampling technique was used. The sampling was done in two stages: in the first stage, 600 (300 male, 300 female) students were assessed. Among the students, 222 were low (99 male, 123 female), 223 were moderate (92 male, 131 female), 81 were high (25 male, 56 female) and 74 were high (34 male, 40 female) having social interaction anxiety.

From this stage we identified the number of high scorers in SIAS (61-80). Upon identifying students with social anxiety and receiving the final consent of the individuals to participate in the research, in the second stage of sampling, 48 students with social anxiety were randomly assigned into two groups: 24 students (12 male, 12 female) in the experimental group and 24 students (12 male, 12 female) in the control group.

2.2 Design of the study

The present study was conducted following the quasi-experimental design. In this study, to examine the impact of cognitive-behavior group therapy (CBGT) in reducing social anxiety the following design was maintained:

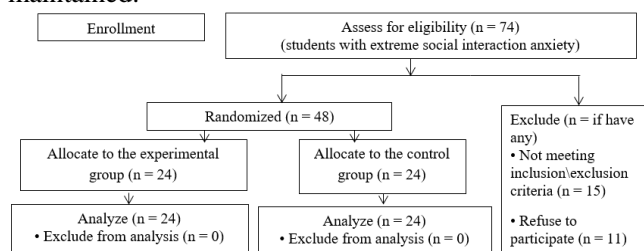


Figure 1. The pre-post outcome design and protocol of the study.

2.3 Measuring Instruments

For data collection, following instruments were used in the present study.

Personal Information Form. Personal information was used in the study to collect information about participants gender/sex, educational year, socio-economic level (Lower class, middle class, and upper class) etc. Based on the family yearly income, they were divided into low-income group, middle and high income group. Participants were assured that their personal information will be handled with confidentiality and all information will be used only for research purpose.

Social Interaction Anxiety Scale. In the present study, the Bangla version of the Social Interaction Anxiety Scale (Jasmine and Deeba, 2017) was used to measure distress when meeting and talking with others. It is widely used in clinical setting and social anxiety research. The test originally developed by Mattick and Clark in 1989 and published in 1998. The scale comprises of 20 items. The client comes up with ratings on how much each item relates to them on a 5-point scale. The response options are: Not at all characteristic of me = 0, Slightly characteristic of me = 1, Moderately characteristic of me = 2, Very characteristic of me = 3, Extremely characteristic of me = 4. Results are computed by reversing the scoring of three positively worded items (items 5, 9, and 11) and summing up scores from all the items. Thus, for both scales, the scores may range from 0 to 80, with the scores 0-20 indicating slightly discomfort or anxiety, scores 21-40 indicating moderately discomfort or anxiety, scores 41-60 indicating very much discomfort or anxiety and scores 61-80 indicating extremely discomfort or anxiety. The reliability of the English version scale of SIAS is high where Cronbach's Alpha ranged from 0.88 to 0.93 and the test-retest reliability is 0.92. In this experiment, the Cronbach's Alpha was 0.79.

2.4 Procedure

In the present study, 600 participants were selected randomly, and all the instruments were administered on the respondents to assess the social anxiety level. After identifying participants with social anxiety and receiving the final consent of the individuals to participate in the research, 48 students with social anxiety were randomly assigned into two groups: 24 students (12 male, 12 female) in the experimental group who received cognitive behavior group therapy and 24 students (12 male, 12 female) in the control group did not receive any therapy.

The experimental subjects were divided into four groups and each group consisted of 6 students (3 male, 3 female). The following sessions were conducted on the experimental group. The first session included-presenting and describing the cognitive behavior model of social anxiety, reasons for cognitive-behavior intervention, preliminary cognitive restructuring training, techniques of identifying the automatic thoughts and giving homework to maintain a diary during the following week for recording the automatic thoughts. During second session the clients were helped to learn basic cognitive restructuring skills, thinking errors, techniques of automatic thoughts disputation and developing appropriate responses. After the second session, the clients were given homework of labeling and disputing thinking errors in identified automatic thoughts.

Sessions 3 through 4 were the core of CBGT. During these sessions, clients were confronted with pertinent feared situations, beginning with moderate difficult to more difficult situations in in-session exposures as intervention progresses. The clients identified their automatic thoughts about the situations, labeled and disputed thinking errors and developed alternative rational responses. The client assisted to assess his or her goals for the exposure and confirmed that these goals were observable, behavioral, and achievable. At the time of exposure, Subjective Units of Discomfort Scale (SUDS) ratings were used to measure anxiety level ranging from 0 to 100. The exposures continued until the client's anxiety started to wane and behavioral goals were met. Cognitive debriefing after exposure included analysis of goal attainment and application of rational responses. Clients were motivated to apply cognitive restructuring skills when they confront situations close to those practiced in the group. During the final session, clients were given time for further exposures, so that they could use cognitive restructuring skills. Then the therapist assessed each client's advancement over the course of treatment. Each session lasted 80 minutes.

3. Results

According to the objectives of the present study, the obtained data were analyzed with the Statistical Package for Social Sciences (SPSS) version 23. To find out whether there was any difference in SIAS score of undergraduate students according to demographic variables, independent sample *t*-test and one-way ANOVA were administrated which were presented in table 1 and table 2. Also, to investigate the effect of cognitive behavior group therapy in reducing social anxiety among students, independent sample *t*-test, paired sample *t*-test were carried out which are presented in table 3 to table 6.

Table 1. Independent-Sample *t*-test of Social Anxiety Assessed by SIAS in terms of the Pre-Assessment according to Gender

Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Male	63.13	1.54	.517	.608
Female	62.88	1.80		

Note. *M* = Mean; *SD* = Standard Deviation; *p* = Probability

The results presented in table 1 indicated that there was no significant difference ($t = .517, p > .05$) in social anxiety between pre-test values according to gender.

Table 2. One Way ANOVA among Different Levels of Socio-Economic Status with respect to SIAS Scores

SV	SS	df	<i>M</i>	<i>F</i>	<i>p</i>
Between Groups	.123	2	.062	.021	.979
Within Groups	129.877	45	2.886		
Total	130.000	47			

Note. *SV* = Source of Variations; *SS* = Sum of Squares; *df* = Degree of Freedom; *M* = Mean Square; *p* = Probability

The results presented in table 2 indicated that there was no significant difference ($F = .021, p > .05$) in social anxiety among various level of socio-economic status.

Table 3. Independent-Sample *t*-test of Social Anxiety Assessed by SIAS in terms of the Pre-Assessment of the control group and experimental group

Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Control	63	1.74	0.00	1.00
Experimental	63	1.62		

Note. *M* = Mean; *SD* = Standard Deviation; *p* = Probability

The results presented in table 3 showed that there was no significant difference ($t = .00, p > .05$) in social anxiety pre-test values in between control and experimental group.

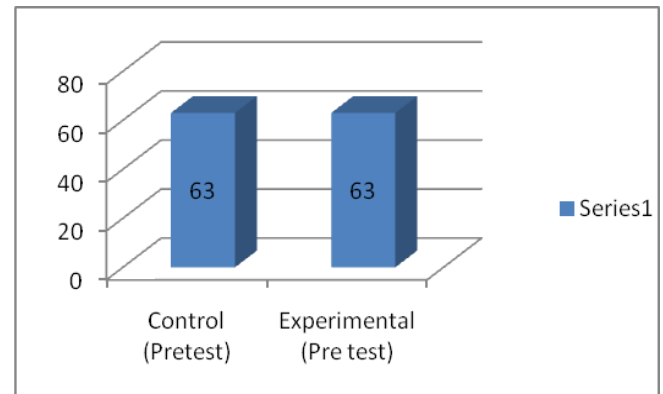


Figure 2. Comparison between pre- test of the control and experimental groups in terms of social anxiety assessed by SIAS.

The graphically presented results in figure 2 show that there was no significant difference in social anxiety between pre-test values in control ($M = 63$) and experimental ($M = 63$) group.

Table 4. Paired-Sample *t*-test of Social Anxiety Assessed by SIAS in terms of the Pre and Post Assessment of the Control Group

Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Control	63	1.71	.061	.952
Control	62.92	2.58		

Note. *M* = Mean; *SD* = Standard Deviation; *p* = Probability

The results presented in table 4 indicated that there was no significant difference ($t = .061, p > .05$) in social anxiety between pre-test and post-test values in control group.

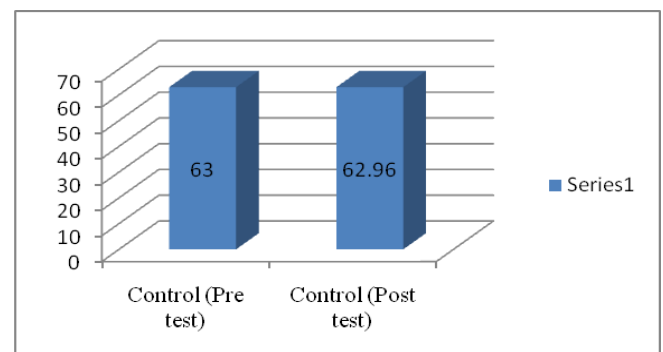


Figure 3. Comparison between pre-test and post of the control group in terms of social anxiety assessed by SIAS.

The graphically presented results in Figure 3 show that there was no significant difference in social anxiety between pre-test ($M = 63$) and posttest ($M = 62.96$) values in control group.

Table 5. Paired-Sample t-test of Social Anxiety Assessed by SIAS in terms of the Pre and Post Assessment of the experimental group.

Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Experimental	63.0	1.74	12.317	0.001
Experimental	46.63	6.18		

Note. *M* = Mean; *SD* = Standard Deviation; *p* = Probability

Table 5 indicated significant difference ($t = 12.317$, $p < .01$) in social anxiety between pre-test ($M = 63$) and post-test ($M = 46.63$) values in experimental group.

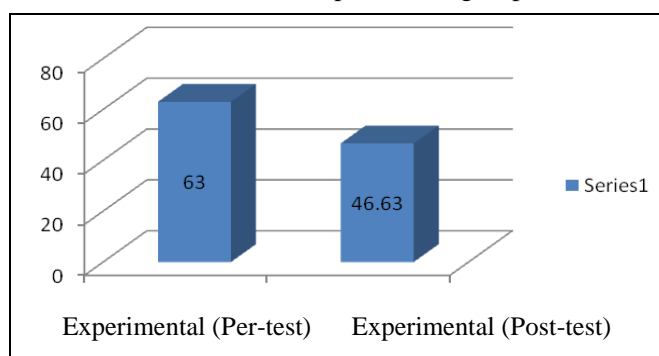


Figure 4. Comparison between pre-test and post test of the experimental group in terms of social anxiety assessed by SIAS.

The graphically presented result in figure 4 show that there was significant difference in social anxiety between pre-test ($M = 63$) and posttest ($M = 46.63$) values experimental group.

Table 6. Independent Sample t-test of Social Anxiety Assessed by SIAS in terms of the Post Assessment of the control group and experimental group.

Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Control	62.96	2.58	-11.954	.001
Experimental	46.63	6.18		

Note. *M* = Mean; *SD* = Standard Deviation; *p* = Probability

The results presented in table 6 reveal that there was significant difference ($t = -11.954$, $p < .01$) in social anxiety between pre-test values in control group and experimental group which indicates that the social anxiety among undergraduate students reduced within an

experimental group after providing cognitive behavior group therapy.

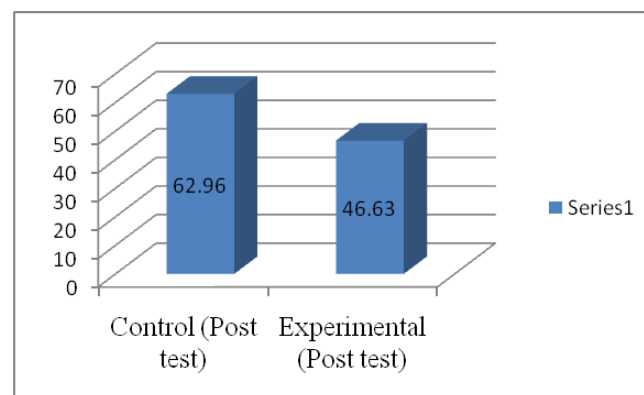


Figure 5. Comparison between posttest of the control and experimental group in terms of social anxiety assessed by SIAS.

The graphically presented results in figure 5 show that there was significant difference in social anxiety between post-test values in control ($M = 62.96$) and experimental ($M = 46.63$) group.

Table 7. Mean and Standard Deviation of Anxiety Assessed by Subjective Units of Discomfort Scale during every session

Session	<i>N</i>	<i>M</i>	<i>SD</i>
Session 1	24	91.25	6.12
Session 2	24	90.00	5.10
Session 3	24	81.66	7.01
Session 4	24	70.83	6.53
Session 5	24	55.42	7.21

Note. *M* = Mean; *SD* = Standard Deviation; *N* = Number

The results presented in the table 7 show that in the experimental group the mean level of anxiety measured by SUDS in each session was decreasing gradually.

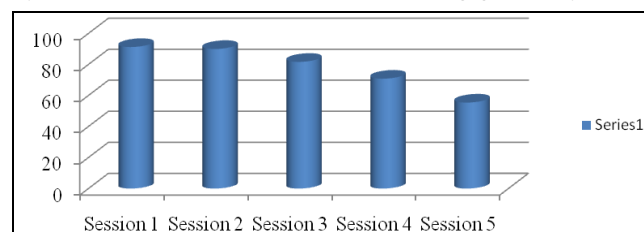


Figure 6. Mean of Anxiety assessed by Subjective Units of Discomfort Scale

The graphically presented results in figure 6 show that anxiety has gradually decreased in each session assessed by SUDS.

4. Discussion

The purpose of the present study was to examine the effectiveness of cognitive behavior group therapy in reducing the social anxiety among undergraduate students of Jagannath University. The first objective was to investigate whether there is any significant difference in social anxiety among students in terms of gender. The results of t-test reported in the table 1 indicated that there is no significant difference in social anxiety among students in terms of gender. The findings of the present study were supported by the study of (Asher and Aderka, 2018) where they found that women are more likely to have social anxiety disorder (SAD) and reported greater clinical severity. Notwithstanding, men with this disorder may also seek treatment to a greater extent. According to their review, the course of SAD seems to be similar for men and women.

The second objective was to explore whether social anxiety varies with socio-economic status of the students. The results of one way ANOVA presented in table 2 indicated that there is no significant difference in social anxiety of students among various level of socio economic status. The findings of the present study were supported by the study of Karlsen, Clench-Aas, Roy and Raanaas (2014) where they found that the role of socio-economic status is unclear in relation to social anxiety in early adolescents.

The third objective was to investigate whether there is any effect of cognitive behavior group therapy in reducing social anxiety among students. The results of t-test presented in the table 3 showed that there is no significant difference in social anxiety between pre-test of experimental and control group. It also showed that the mean of social anxiety of pre-test of experimental and control group is equal.

The results of t-test presented in the table 5 showed that there is significant difference between the pre and post-test values of experimental group and also presented that the post-test mean of social anxiety was lower than the pre-test mean of social anxiety of the experimental group. And the results of t-test presented in the table 6 indicated extreme significant difference between the post-test value of social anxiety of experimental group and control group. Subjective units of discomfort are also measured during every session in the experimental group. The result presented in the table 7 showed that in the experimental group the mean of SUDS in each session is decreased. This indicated that there was significant improvement within an experimental group after providing cognitive behavior group therapy. The therapy program was provided only to the experimental group, which showed reduced social anxiety. So, the results

suggested that the cognitive behavior therapy has significant effect in reducing social anxiety among undergraduate students. The findings of the study supported by the study of Rajkumar, Vinod, Subramanian and Karthikeyan (2015) where they found that the cognitive behavior group therapy has significant effect in reducing social anxiety among undergraduate students.

The present study had some limitations which should be addressed by the future researcher of this study. First, the study has been conducted with a small number of students (48) and the sample for the study was selected only from Jagannath University. Second, the number of sessions in CBGT was limited. Third, the study was only conducted for the extreme social anxiety of undergraduate students. Fourth, the study was done for a short duration of time. To overcome the limitations of the present study future research may be conducted to confirm the long-term effect of CBGT.

5. Conclusion and Recommendations

In summary, the results of this study suggest that cognitive behavior group therapy for social anxiety can reduce the symptoms of social anxiety among undergraduate students. This study is meaningful because it can lead to a change in social anxiety by correcting cognitive distortions, changing irrational thinking and maladaptive behavior of undergraduate students. Universities should screen students who have social anxiety and actively provide them cognitive behavior group therapy by cognitive behavior therapist having a wealth of experience.

Apart from the above discussion, following recommendations may be considered. Firstly, the cognitive behavior group therapy examined in this study indicated significant reduction in social anxiety among Jagannath University students. These findings certainly warrant further empirical investigation of the intervention for other university students, school students and other domain people. Secondly, study can be done on a larger sample size. Thirdly, study can be done on different age group. Finally, study can be done for other level of social anxiety.

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