Research Paper

Cognitive Behavioral Therapy (CBT) for Social Interaction Anxiety: Understanding the Treatment Approach

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ABSTRACT

The current study set out to investigate how well undergraduate students' social interaction anxiety may be decreased by cognitive-behavioral therapy. The Social Interaction Anxiety Scale (Jerin et al., 2017) was employed to measure social interaction anxiety. Two phases of random selection were used to create the sample: in the first, 563 students (269 males and 294 females) were evaluated. Students having a high value of SIAS (61–80) at this stage are found to exhibit social interaction anxiety symptoms. A total of 32 socially anxious students were divided into two groups at random in the second stage: 16 students (8 males and 8 females) made up the experimental group, and 16 students (8 males and 8 females) made up the control group. In this investigation, pre-post outcome design was used. In this investigation, an intervention was given to the experimental group but not to the control group. One-way ANOVA, paired sample t-test, and independent sample t-test were used to examine the collected data. The study's conclusions indicated that there was no difference in students' SIAS scores based on their socioeconomic status and gender. However, the results showed a significant difference in the experimental group's SIAS scores between the pre and post-test. The results also showed a significant difference in SIAS scores between the experimental and control groups. It might be suggested that undergraduate students utilize cognitive-behavioral group therapy to manage their social anxiety.

Keywords: *Social Interaction Anxiety, Cognitive-Behavior Therapy, Undergraduate Students*

Social interaction anxiety is a mental health condition marked by extreme dread or anxiety in social settings where sufferers expect to be scrutinized, judged negatively, or embarrassed (American Psychiatric Association, 2022). It has a substantial negative impact on university students' academic performance and general well-being. It is typified by an extreme fear of social circumstances and unfavorable self-evaluations in social settings (Hossain & Muhammad, 2023). Approximately 24% of university students in Bangladesh have SIA (Rabby et al., 2023). A number of factors influence SIA, such as temperament, genetic predisposition, and environmental circumstances (Biederman et al., 2019). SIA may be accelerated in Bangladesh due to cultural factors such the emphasis on

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social conformity, the pressure to do academically well, and the restricted availability of mental health resources (Islam et al., 2020). Societal stigma and traditional gender norms surrounding mental health can be responsible for increasing SIA and reducing help-seeking behavior (Khan et al., 2016). People who have dysfunctional family ties or little social support develop SIA (Hossain et al., 2014). According to Saeed et al. (2018), personality factors such as neuroticism and low self-esteem may play crucial role in the development of SIA. Competitive circumstances and high academic expectations can cause SIA (Alim et al., 2017).

Academic achievement and university adaptability were impaired by SIA (Chambless & Gillison, 2016). Students with SIA have problem of attending courses, taking part in discussions, and organizing study groups (Hofmann & Soderstrom, 2013). According to Bayram and Bilgel (2008), lower academic engagement, worse marks, or even dropout is a fear of bad evaluation. Furthermore, sadness, low self-esteem, and a lower quality of life might be caused by the ongoing worry and avoidance associated with SIA (American Psychiatric Association, 2013).

The basic idea of CBT is to identify and alter dysfunctional thoughts and maladaptive behaviors that fuel anxiety (Beck & Clark, 2011). According to Hofmann and Clark (2009), CBT is used in conjunction with SIA to address wrong interpretations of social interactions, negative views about oneself and others, and the development of useful coping mechanisms dealing with social circumstances. Numerous researches have shown that CBT is effective in decreasing anxiety symptoms and improving social functioning (Hofmann & Clark, 2017; Otto et al., 2010). According to a meta-analysis conducted by Hofmann et al. (2019), in comparison to waitlist control groups, CBT produced a statistically significant reduction in social anxiety symptoms. Similarly, group CBT significantly helped student participants' social functioning and minimized social anxiety symptoms, according to Alden et al. (2015). Furr et al. (2016) found significant improvements in social anxiety symptoms and social avoidance in a group that received CBT and another in a self-help control group. According to research, the quality of life, social engagement, and academic achievement of university students with SIA's can be enhanced through CBT (Hofmann et al., 2018; Olatunji et al., 2013). This may be due to better interpersonal skills gained in therapy, less avoidance, and greater social confidence. According to research, this evidence-based strategy consistently reduces social anxiety symptoms in college students across a range of cultural contexts (Farrer et al., 2013; Guo et al., 2020). Reduction of self-harm and development of social skills, self-efficacy, and life satisfaction among college students was gained by utilizing CBT in group settings (e.g., Ahmed et al., 2017; Haque et al., 2018).

In Bangladesh, there is limited research on CBT for social interaction anxiety. Ahmed et al. (2017) in a group CBT intervention, revealed that exposure therapy and cognitive restructuring significantly declined anxiety and strengthened social functioning. Hossain and Muhammad (2023) expressed that Cognitive-Behavior Group Therapy (CBGT) significantly lessens social anxiety symptoms in undergraduate Bangladeshi students compared to a waitlist control group. This shows that CBT-based therapies are helpful for enhancing the mental well-being and social skills of SIA-affected students. Preliminary research yields encouraging findings, but still,there are a number of significant gaps in our knowledge on CBT's efficacy for SIA in Bangladesh. This research will add significant insights into the possibility of this evidence-based method for improving the mental well-being of

Bangladeshi students dealing with SIA by offering CBT on anxiety symptoms and social avoidance behaviors.

Objectives

The objectives of the current investigation were:

1. To investigate whether the student's socioeconomic status affects their level of social interaction anxiety.
2. To determine whether gender has a noticeable effect on student's social interaction anxiety.
3. To find out if students' anxiety about social interactions may be reduced by cognitive behavior group therapy.

METHODOLOGY

Sample

All undergraduate students at Bangabandhu Sheikh Mujibur Rahman Science and Technology University made up the population. A random sampling procedure is employed to choose the participants and split them into two groups. Two phases of the sampling process are carried out: in the first, 563 students (269 males and 294 females) are evaluated using a Google form of Social Interaction Anxiety Scale (Facebook group, WhatsApp group, and Messaging group). After determining the number of high scorers in SIAS (61–80), 32 socially anxious students were divided into two groups at random during the second sampling stage: 16 students (8 males, 8 females) made up of the experimental group, and 16 students (8 males, 8 females) made up of the control group. Once the students with social interaction anxiety are identified the participants' final approval to take part in the study was obtained.

Instruments

The study employed participants' personal information sheets to gather data on their gender, mobile number, and socioeconomic class (upper, middle, and lower). One measure was used in this study,

Social Interaction Anxiety Scale

The Bangla version of the Social Interaction Anxiety Scale, a 20-item self-report measure, is used in this study (Jerin et al., 2019). According to Jenner et al. (2019), the Bangla SIAS had a Cronbach's score of 0.89. According to Jenner et al. (2019) and Mattick & Clarke (1998), the SIAS is a 20-item survey that uses a Likert-type scale with 0 representing "not at all" and 4 representing "extremely." Anxiety-related reactions to a range of social situations are described by the components of SIAS. It has demonstrated strong psychometric features in both clinical and non-clinical groups and has been found to function well in a wide range of cultural contexts (de Beurs et al., 2014; Kanai et al., 2004; Mortberg et al., 2017). Higher scores are indicative of more anxiety related to social interactions. According to Heimberg et al. (1992), a clinical degree of SAD is indicated by a cut-off point of 34 on the 20-item SIAS.

Procedure

A total of 563 participants were chosen at random for the current study, and each respondent is given all the instruments needed to assess social interaction anxiety.32 students with social anxiety were randomized into two groups after the study's participants were identified and their final consent to participate was obtained. Of these, 16 students (8 males and 8 females) received group therapy based on cognitive behavior therapy in the experimental

group, while the remaining 16 students (8 males and 8 females) in the control group did not receive any therapy. Eight students-four male and four female-made up each of the two groups into which the experimental subjects were split. The experimental group was the subject of the ensuing sessions.

Table 1. A Summary of Cognitive-Behavioral Therapy Sessions

Sessions	Objectives	Activities
Session 1	Introduction & Psychoeducation	Welcome the participants explain Social Interaction Anxiety (symptoms, causes, and consequences), overview of Cognitive Behavioral Therapy (CBT), setting individual and group goals.
Session 2	Identifying Negative Thoughts & Beliefs	Recognizing automatic negative thoughts (ANTs), exploring core beliefs underlying SIA, challenging the ANTs and core beliefs
Session 3	Cognitive Restructuring & Positive Self-Talk	Developing alternative, more realistic, and positive thoughts for common social situations, practicing cognitive restructuring exercises to challenge ANTs and core beliefs, positive self-talk and internal validation
Session 4	Relaxation & Stress Management Techniques	Relaxation techniques like deep breathing, and mindfulness, identifying personal stress triggers and developing coping strategies, practicing relaxation techniques in the context of social anxiety
Session 5	Gradual Exposure & Social Skills Training	Developing a personalized exposure hierarchy of gradually increasing social challenges, role-playing and practicing social skills in a safe and supportive group environment, addressing specific social fears and anxieties through exposure exercises
Session 6	Assertiveness & Communication Skills	Understanding the importance of assertiveness in social interactions, learning effective communication skills like active listening, clear expression, and saying no, practicing assertive communication in role-playing situations
Session 7	Maintenance & Relapse Prevention	Identifying early warning signs of anxiety and potential relapse triggers, developing coping strategies and resources for managing difficult situations, planning for long-term maintenance of CBT skills and progress
Session 8	Review & Wrap-up	Reviewing individual and group progress made throughout the program, celebrating successes and acknowledging challenges faced, developing a personalized plan for continued self-management of SIA, sharing resources, and encouraging ongoing support

RESULTS

One-way ANOVA, Independent-Sample t-test, and Paired-Sample t-test were carried out using SPSS-22 to analyze the collected data. The outcomes are displayed in the tables below.

Table 2. Summary of One-Way ANOVA of Social Interaction Anxiety by Socio-Economic Status

Variables	Source of Variations	SS	df	M	F	*p*
	Between Groups	10.32	2	5.16	1.015	.375
Social Interaction Anxiety	Within Groups	147.54	29	5.08		
	Total	157.87	31			

The data in table 2 indicates that various level of socio-economic status has no significant effect ($F = 1.015$, $p > .01$) on social interaction anxiety among university students.

Table 3. Regarding Gender t-test (Independent-Sample) of Social Interaction

Variables	Group	M	SD	*t*	*p*
Social Interaction Anxiety	Male	66.68	2.05	1.965	.059
	Female	65.18	2.25		

Table 3 shows that there is no significant difference ($t = 1.965$, $p > .01$) in social interaction anxiety mean score of males ($M = 66.68$) and female ($M = 65.18$) university students.

Table 4. Pre-Assessment t-test (Independent-Sample) of Social Interaction Anxiety as to the Experimental Group and Control Group

Variables	Group	M	SD	*t*	*p*
Social Interaction Anxiety	Experiment	66.12	2.60	.464	.646
	Control	65.75	1.91		

Table 4 expresses that there is no significant difference ($t = .464$, $p > .01$) in social interaction anxiety pre-test scores in between the experimental ($M = 66.12$) and control ($M = 65.75$) group.

Table 5. Paired-sample t-test of Social Interaction Anxiety in terms of the Pre and Post Assessment of the Control Group

Variables	Group	M	SD	*t*	*p*
Social Interaction Anxiety	Control	65.75	1.91	1.225	.240
	Control	65.25	2.26		

The results of Table 5 indicate that there is no significant difference ($t = 1.225$, $p > .01$) in social interaction anxiety between pre-test ($M = 65.75$) and post-test ($M = 65.25$) score in control group.

Table 6. Pre and Post Assessment t-test (Paired-Sample) of Social Interaction Anxiety Concerning the Experimental Group

Variables	Group	M	SD	*t*	*p*
Social Interaction Anxiety	Experiment (Pre-assessment)	66.12	2.60	38.258	.001
	Experiment (Post- assessment)	37.81	1.51		

The values of Table 6 reveals significant difference ($t = 38.258$, $p < .01$) in social interaction anxiety between pre-test ($M = 66.12$) and post-test ($M = 37.81$) values in the experimental group.

Table 7. Post Assessment t-test (Independent-Sample) of Social Interaction Anxiety Regarding the Experimental Group and Control Group

Variables	Group	M	SD	t	p
Social interaction anxiety	Experiment	37.81	1.51	-35.213	.001
	Control	64.06	2.56		

The findings displayed in Table 7 demonstrate that there is a significant difference ($t = -35.213$, $p < .01$) in social interaction anxiety between post-test values in the experimental group ($M = 37.81$) and the control group ($M = 64.06$).

DISCUSSION

The current study set out to investigate the efficacy of cognitive behavior group therapy in lowering university undergraduates' levels of social interaction anxiety. The initial objective was to investigate whether the students' socioeconomic situation had an impact on their level of social interaction anxiety. The one-way ANOVA results shown in Table 2 showed those students' levels of social interaction anxiety did not significantly differ across socioeconomic status levels. This indicates that there are appreciable differences in the self-reported SIA scores of those with high, medium, and low SES. This finding is similar with research done by Cheng et al. (2019) that found no significant relationship between SES and SIA. The research by Karlsen et al. (2014), which revealed the unclear connection between socioeconomic position and social anxiety in early adolescents, supported the findings of the current study.

The second objective was to identify whether a noticeable gender difference exists in the social interaction anxiety experienced by students. There was no clear variation in students' social anxiety levels based on gender, according to the results shown in Table 3. This finding suggests that, within the context of this study, male and female university students experience similar levels of social interaction anxiety. While this result may seem surprising, it aligns with some existing research. For example, a meta-analysis conducted by Evans et al. (2018) revealed no significant variations in social anxiety symptoms between genders in young adults and adolescents. The research by Asher and Aderka (2018) found that social anxiety disorder (SAD) is more common in women and reported higher clinical severity, corroborated the findings of the current investigation. However, men may also seek treatment for this illness more frequently. Their research indicates that the course of SAD appears to be comparable for both genders.

The third objective was to find out if cognitive behavior group therapy could help students feel less anxious about social situations. Table 4's results indicated that there was no significant difference in social anxiety between the experimental and control groups' pre-test scores. Additionally, it demonstrated that the experimental and control groups' pre-test social anxiety means were equal. The results displayed in Table 6 indicated that there was a significant difference between the experimental group's pre and post-test values and that the group's post-test mean for social anxiety was lower than its pre-test mean. Furthermore, the results displayed in Table 7 indicated a highly significant difference in the post-test social anxiety values between the experimental group and the control group. This implied that

implementing cognitive behavior group therapy produced a significant improvement in one of the experimental groups. The therapy program was only given to the experimental group, and their level of social anxiety was lower. Thus, the results showed that cognitive behavior therapy can dramatically lower social anxiety among undergraduate students. These outcomes are in line with past research (Clark & Beck, 2010; Hofmann & Stemberger, 2013) that showed how well cognitive behavioral treatment (CBT) works for treating social anxiety disorder. The focus of cognitive behavioral therapy on identifying and modifying negative thought patterns that contribute to social anxiety may be linked to the decrease in anxiety (Hofmann & Stemberger, 2013). These findings are in line with past research on the efficacy of cognitive behavioral therapy (CBGT) for social anxiety disorder (SAD) in a variety of populations, including young adults and adolescents (Clark et al., 2020; Hofmann & Otto, 2012). A 2015 study by Rajkumar, Vinod, Subramanian, and Karthikeyan, which found a significant decrease in social anxiety in undergraduate students receiving cognitive behavior group therapy, supports the study's findings.

There were certain limitations to the current study. Initially, only 32 individuals were included in the study for comparison, and only students from Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalgonj were included in the sample. Secondly, the number of CBT sessions is limited. Thirdly, the research was limited to university students experiencing severe social anxiety. Fourth, the investigation was conducted in a little amount of time. Future studies may be carried out to confirm the long-term impact of CBT in order to address the limitations of the current study.

Implications

The findings of the study indicate that social interaction anxiety levels can be significantly reduced by using CBT therapies, particularly in group situations. This strategy offers educational institutions and counseling organizations an efficient means to help students better manage their anxiety and enhance their general well-being. The study is significant because it emphasizes the need of early intervention and specialized therapy strategies to address social anxiety in college students, irrespective of their gender or socioeconomic background. Institutions can offer interventions that are both accessible and effective to foster a supportive environment that supports students' mental health and academic performance.

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