

Effectiveness of Mindfulness Based Cognitive Therapy in Reducing Homesickness and Improving Mental Health

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ABSTRACT

The aim of the study was to examine the efficacy of mindfulness based cognitive therapy in reducing homesickness and enhancing the mental well-being of first-year students at Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj. The researcher utilized a simple random sampling technique. 202 students (95 males and 107 females) participated in the study and completed the Bangla version of the Utrecht Homesickness Scale and the Depression Anxiety Stress Scale-21. Researcher randomly selected 24 students who scored high on the homesickness scale, dividing them into an experimental group (6 males and 6 females) and a control group (6 males and 6 females). Mindfulness-Based Cognitive Therapy (MBCT), a total of eight sessions, was provided to the experimental group. The results revealed a significant and positive association among homesickness and the degrees of stress, anxiety, and depression. The results showed that female students exhibited higher levels of homesickness, stress, anxiety, and depression in comparison to male students. The finding expressed that socioeconomic status did not significantly influence the severity of these variables. Researcher also investigated the efficacy of MBCT in mitigating homesickness and enhancing mental well-being. The post-intervention assessments indicated that the experimental group showed a significant decrease in homesickness, stress, anxiety, and depression in comparison to the control group. The findings indicated that a focused intervention in MBCT can reduce homesickness symptoms and enhance the overall psychological well-being of university students. The findings improve our knowledge of the impact of homesickness on mental well-being and emphasizes the importance of providing assistance to students who encounter homesickness while transitioning to university life.

Keywords: *Homesickness, Mental Health Issues, Mindfulness Based Cognitive Therapy*

University students report experiencing homesickness at some point in their academic careers, with prevalence estimates ranging from 20% to 80% (Geyer & Böttcher 2017). Homesickness is defined as feelings of sadness, loneliness, and longing for home (Geyer & Böttcher, 2017). According to Goher and Böttcher (2017), homesickness can have a serious detrimental effect on students' mental health by causing stress, anxiety and depression. University students frequently experience mental health issues, with

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prevalence rates varying between 25% and 50% (World Health Organization, 2018). Problems with mental health can have a negative impact on a student's academic achievement, social engagement, and overall well-being (World Health Organization, 2018). Research suggests a strong association between homesickness and mental health issues, with homesickness contributing to mental health difficulties (Geyer & Böttcher, 2017; Liu et al., 2020). Liu et al. (2020) revealed a strong positive interconnection between homesickness and the experience of depression, anxiety, and stress among university students. Thurber and Walton (2012) conducted a longitudinal study that investigated the effect of homesickness on mental health throughout the transition to university. Their research confirmed the idea that feelings of homesickness contribute to increased levels of stress, anxiety, and depression among students.

Smith et al. (2020) conducted a comprehensive literature review on homesickness and mental health, synthesizing evidence from multiple studies to elucidate the complex interplay between homesickness and psychological well-being. The above findings expressed that homesickness is a significant risk factor for mental health problems among university students. It is essential for universities and other post-secondary institutions to provide support to students who are experiencing homesickness, in order to help them maintain their psychological well-being. Due to high prevalence between homesickness and mental health problems, it is vital to examine the effectiveness of interventions for these issues.

Mindfulness-Based Cognitive Therapy (MBCT) is an effective therapy. MBCT refers to psychotherapy that assembles mindfulness meditation with cognitive therapy (CT). Mindfulness meditation includes paying attention non-judgmentally to the present moment. CT helps individuals to identify and challenge negative thoughts and beliefs (Segal et al., 2002). Researches also support this Therapy. Researches provide robust support for the efficacy of MBCT in addressing various mental health challenges among university students. Keng et al. (2013) study demonstrated the beneficial effects of MBCT in minimizing symptoms of depression and anxiety among undergraduates. This research underscores the potential of MBCT as an intervention strategy for enhancing psychological well-being in academic settings. Singh et al. (2017) conducted another study that revealed the positive impact of MBCT on improving sleep quality and reducing stress among university students. This finding suggests that MBCT may offer holistic benefits by addressing both mental health symptoms and sleep disturbances commonly experienced by students. Meta-analytic research provides further validation of the efficacy of MBCT. A meta-analysis of Hofmann et al. (2010) demonstrated the overall efficacy of mindfulness-based therapies, like MBCT, in minimizing symptoms of anxiety and depression across various populations. This meta-analysis enhances the empirical foundation for suggesting MBCT as a practical solution for university students facing mental health difficulties. Goldberg et al. (2021) meta-analysis, to investigate the impact of mindfulness-based therapies on several mental health outcomes, such as reducing stress and improving emotional regulation. The results of this research recommend the implementation of MBCT into comprehensive mental health support services for university students, emphasizing its capacity to enhance resilience and well-being in this group. Liu et al. (2020) systematic review presented extensive evidence affirming the efficacy of MBCT in diminishing homesickness and alleviating symptoms of depression, anxiety, and stress among undergraduates.

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This review synthesized findings from multiple studies and highlighted the consistent positive outcomes associated with MBCT interventions. The researchers also found that the effects of MBCT were stronger for students who were homesick more often and for those who had more severe homesickness symptoms. Overall, the rationale for this study lies in addressing the pressing need to support university students experiencing homesickness and associated mental health challenges. By exploring the efficacy of MBCT as an intervention, the focus of this research is to aid in the establishment of evidence-based practices for improving students' mental health and well-being during their academic transition.

Objectives

The main objective of the study was to investigate the effectiveness of mindfulness based cognitive therapy in reducing homesickness and improving mental health. The specific objectives:

- To investigate whether there is any relationship among homesickness and mental health issues.
- To look into whether there is any difference in homesickness and mental health among students in terms of gender.
- To explore whether homesickness and mental health is varied with socio-economic status of the students.
- To examine the effectiveness of mindfulness based cognitive therapy in reducing homesickness and improving mental health between experimental and control groups.

METHODOLOGY

Sample

The population consisted of first-year students at Bangabandhu Sheikh Mujibur Rahman Science and Technology University. The researcher employed a simple random sampling technique to select the students and assign them into two independent groups. The sampling procedure comprised of two separate stages. During the initial stage, a total of 202 students (comprising 95 males and 107 females) completed a Google form of the Homesickness Scale and the Depression Anxiety Stress Scale-21. This assessment was done via Facebook group. After determining the number of students obtaining high scores on the Homesickness Scale, a group of 24 students who were currently suffering homesickness were randomly allocated into two groups during the subsequent stage of sampling. The experimental group comprised 12 students, evenly divided between males and females. Similarly, the control group likewise comprised 12 students, with an equal distribution of males and girls.

Instruments

The study used participants' personal information sheets to gather data regarding their gender, age, cellphone number, and socioeconomic status (categorized as upper, middle, and lower). This study utilized two measures,

- **The Utrecht Homesickness Scale (UHS).** The Bangla version of the UHS (Hossain et al., 2023) was developed by Stroebe et al. (2002) was used. It has 20 items evaluated on 5-point Likert-type scale, which varies from 1 (not at all) to 5 (very strong). High scores on the scale indicate a higher level of homesickness. The initial scale demonstrated a high level of internal reliability ($r = .94$). The Cronbach's alpha for the Bangla version was 0.85.

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- **The Depression Anxiety Stress Scale.** The Bangla version of the DASS-21 (Alim et al., 2014) had been developed by Lovibond et al. (1995) was used. The scale consists of 21 items that are evaluated using a four-point Likert scale, ranging from 0 (did not apply to me at all) to 3 (applied to me very much). The DASS-21 questionnaire consists of specific items that evaluate depression (items 3, 5, 10, 13, 16, 17, 21), anxiety (items 2, 4, 7, 9, 15, 19, 20), and stress (items 1, 6, 8, 11, 12, 14, 18). The total score for each category (depression, anxiety, and stress) should be doubled. The Bangla versions Cronbach's alpha for depression, anxiety, and stress were 0.80, 0.72, and 0.76, respectively. The overall reliability (alpha) was .90.

Procedure

A questionnaire package comprised of a Personal Information Form, Bangla version **Utrecht Homesickness Scale (UHS)** and **Depression Anxiety Stress Scale-21 (DASS-21)** were administered to all the 1st year student of Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj by online platform (Facebook Group). Among 202 respondent students those scoring high on UHS then communicated that training on Mindfulness Based Cognitive Therapy will be given. After getting consent from the high scorer students, two groups were (Experimental group and Control group) formed. Training on Mindfulness Based Cognitive Therapy of 8 sessions were given to the experimental group.

Table 1. Sessions of Mindfulness Based Cognitive Therapy

Sessions	Content
1	Greeting and rules of the training will express, definitions of mindfulness and cognitive behavior therapy, both inside and outside movements of the mind, home works.
2	Going over homework, exercising mindful thought, mindful body scanning, sitting meditation, presenting home tasks.
3	Evaluating home tasks, practicing conscious three minutes seeing and hearing, concentrating for five minutes on the five senses, home exercise.
4	Examining home exercise, the body's response, walking mindfully, focusing on an unpleasant experience for three minutes, practicing the relationships between thoughts, emotions, body, senses, and behavior, workout at home.
5	Studying workout, healthy coping mechanisms, daily meditation, three-minute breathing space (3MBS), assignment.
6	Appraising assignment, engaging in mindful thought processes, taking care of oneself, practicing mindful speaking and listening, rehearsing ideas in succession for an hour, receiving input from fellow practitioners, and rehearsal materials for home.
7	Analyzing rehearsal materials, exercising greater caution, practicing mindful yoga, making an unpleasant experience enjoyable, and assigning homework.
8	Assessing homework, and practicing mountain meditation, summarizing all of the sessions.

RESULTS

The collected data was analyzed using SPSS-27 by the application of correlation, independent-sample t-test, and one-way ANOVA. The results are presented in the tables below.

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Table 2. Correlation among Homesickness, Stress, Anxiety and Depression

	1	2	3	4
1.Homesickness	-			
2. Stress	.599**	-		
3. Anxiety	.534**	.761**	-	
4. Depression	.534**	.770**	.670**	-

Table 2 revealed that homesickness showed significant positive correlations with stress ($r = .599, p < .01$), anxiety ($r = .534, p < .01$), and depression ($r = .534, p < .01$). Significant positive correlations were also found among stress, anxiety, and depression dimensions indicating that students having higher levels of stress are also likely to report higher levels of anxiety ($r = .761, p < .01$) and depression ($r = .770, p < .01$). Similarly, a strong positive connection was observed between anxiety and depression ($r = .670, p < .01$).

Table 3. Comparison Homesickness, Stress, Anxiety and Depression between Male and Female

Variables	Gender	M	SD	t	p
Homesickness	Male	41.41	9.59	-3.66	< .001
	Female	46.27	9.26		
Stress	Male	19.54	8.98	-3.81	< .001
	Female	24.47	9.36		
Anxiety	Male	14.10	8.07	-4.34	< .001
	Female	19.15	8.41		
Depression	Male	17.28	9.51	-2.03	< .05
	Female	20.04	9.76		

The results of table 3 revealed significant differences in the levels of homesickness, stress, anxiety, and depression between male and female students. Male students reported lower mean scores for homesickness ($M = 41.41, SD = 9.59$) compared to female students ($M = 46.27, SD = 9.26$) ($t = -3.66, p < .001$). Similarly, male students reported lower mean scores for stress ($M = 19.54, SD = 8.98$) compared to female students ($M = 24.47, SD = 9.36$) ($t = -3.81, p < .001$). Moreover, male students had lower mean scores for anxiety ($M = 14.10, SD = 8.07$) compared to female students ($M = 19.15, SD = 8.41$) ($t = -4.34, p < .001$). However, the difference in depression scores between male ($M = 17.28, SD = 9.51$) and female students ($M = 20.04, SD = 9.76$) was smaller, though still significant ($t = -2.03, p < .05$).

Table 4. Effect of Socioeconomic Status on Homesickness, Stress, Anxiety and Depression

		Sum of Squares	df	Mean Square	F	p
Homesickness	Between Groups	165.98	2	82.99	.881	.416
	Within Groups	18754.82	199	94.25		
	Total	18920.79	201			
Stress	Between Groups	218.09	2	109.05	1.214	.299
	Within Groups	17870.96	199	89.80		
	Total	18089.05	201			
Anxiety	Between Groups	28.79	2	14.39	.193	.825
	Within Groups	14866.53	199	74.71		
	Total	14895.31	201			

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		Sum of Squares	df	Mean Square	F	p
Depression	Between Groups	29.29	2	14.65	.154	.857
	Within Groups	18942.70	199	95.19		
	Total	18971.99	201			

Table 4 revealed no significant effect of socioeconomic status on homesickness ($F = 0.881$, $p > .05$), stress ($F = 1.214$, $p > .05$), anxiety ($F = 0.193$, $p > .05$), and depression ($F = 0.154$, $p > .05$) among students.

Table 5. Summary of t-test between Experimental and Control Group

Variables	Assessment	Group	M	SD	t	p
Homesickness	Pre-assessment	Experimental group	62.33	4.46	.13	.897
		Control group	62.09	4.57		
	Post-assessment	Experimental group	38.92	1.16	-	<
		Control group	60.25	4.25		
Stress	Pre-assessment	Experimental group	30.17	6.41	-0.91	.375
		Control group	32.67	7.10		
	Post-assessment	Experimental group	21.42	2.78	-4.44	<
		Control group	29.42	5.58		
Anxiety	Pre-assessment	Experimental group	21.83	5.67	-1.97	.062
		Control group	28.00	9.26		
	Post-assessment	Experimental group	14.58	3.85	-4.86	<
		Control group	25.67	6.89		
Depression	Pre-assessment	Experimental group	27.08	6.20	-0.86	.397
		Control group	30.33	11.47		
	Post-assessment	Experimental group	19.25	4.43	-2.86	.011
		Control group	27.58	9.07		

Table 5 summarizes t-test comparisons between the experimental and control groups for homesickness, stress, anxiety, and depression pre- and post-assessment. Pre-assessment showed no significant difference in homesickness ($t = 0.13$, $p > .001$), but post-assessment revealed significantly lower levels in the experimental group ($t = -16.79$, $p < .001$). Similarly, stress pre-assessment showed no significant difference ($t = -0.91$, $p > .001$), but post-assessment indicated lower stress in the experimental group ($t = -4.44$, $p < .001$). Pre-assessment for anxiety trended towards significance ($t = -1.97$, $p > .001$), and post-assessment showed significantly lower anxiety in the experimental group ($t = -4.86$, $p < .001$). Pre-assessment for depression did not differ significantly ($t = -0.86$, $p > .001$), but post-assessment showed lower depression in the experimental group ($t = -2.86$, $p > .001$).

DISCUSSION

This study aimed to examine the efficacy of mindfulness based cognitive therapy in minimizing homesickness and improving mental health of first-year students at Bangabandhu Sheikh Mujibur Rahman Science and Technology University. The first objective was to investigate whether there will any association among homesickness and mental health issues. Table 2 showed a positive correlation between higher degrees of homesickness and increased levels of stress, anxiety, and depression among the participants. The results align with prior research indicating that homesickness can significantly impact

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mental health outcomes, leading to increased levels of stress, anxiety, and depression (Smith et al., 2020; Thurber & Walton, 2012). The findings also showed strong positive correlations among stress, anxiety, and depression dimensions further emphasize the interconnected nature of these mental health constructs (Lovibond & Lovibond, 1995). A study of Lovibond and Lovibond (1995) highlighted the intricate relationship between these constructs, suggesting that individuals experiencing elevated stress levels are also experience heightened anxiety and depression symptoms. Similarly, individuals with elevated anxiety levels may also exhibit symptoms of stress and depression, and vice versa.

The second objective was to investigate any differences in homesickness and mental well-being among students in terms of gender. The findings from Table 3 suggest that female students experience greater levels of homesickness, stress, anxiety, and depression in comparison to male students, indicating potential gender differences in mental health outcomes among students. This aligns with existing literature indicating that females tend to report higher levels of psychological distress compared to males (Chomon & Patel, 2022). The third objective was to explore whether homesickness and mental health will vary with socio-economic status of the students. Table 4 findings suggested that socioeconomic status does not significantly influence the severity of homesickness, stress, anxiety, or depression. These results align with previous research that has also found limited or no significant association between socioeconomic status and mental health outcomes among students (Smith et al., 2019; Johnson & Lee, 2020).

The fourth objective was to examine the effectiveness of mindfulness based cognitive therapy in reducing homesickness and improving mental health between experimental and control groups. Table 5 demonstrated the effectiveness of an intervention in improving psychological variables, including homesickness, stress, anxiety, and depression, among participants in the experimental group compared to the control group. Prior to the intervention, there were no significant differences between the two groups in homesickness, stress, anxiety, or depression levels. However, post-assessment revealed significant improvements in these variables among participants in the experimental group. The observed reduction in homesickness levels in the experimental group post-assessment is consistent with previous research indicating that targeted interventions can alleviate homesickness symptoms (Thurber & Walton, 2012). The significant decrease in stress levels among participants in the experimental group aligns with theories such as the Lazarus and Folkman's Transactional Model of Stress and Coping proposes that practicing good coping methods can alleviate stress (Lazarus & Folkman, 1984). Additionally, the substantial decrease in anxiety levels post-intervention is in line with cognitive-behavioral theories, which emphasize the role of cognitive restructuring in alleviating anxiety symptoms (Beck, 1976). Furthermore, the significant reduction in depression levels in the experimental group post-assessment is consistent with the findings of studies demonstrating the efficacy of interventions such as cognitive-behavioral therapy in treating depression (Cuijpers et al., 2013). Overall, these findings provide empirical evidence supporting the effectiveness of the intervention in improving psychological well-being among participants.

Implications

The experience of homesickness and mental health issues among undergraduates is a serious concern. Findings revealed that the training of Mindfulness Based Cognitive Therapy (MBCT) help students about their thoughts and feelings about homesickness and mental health problems. This awareness helped students to understand and confront negative

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thoughts and beliefs that were contributing to their distress. MBCT trained students on coping skills for managing difficult emotions, such as sadness, loneliness, anxiety, and stress. To manage student's homesickness and mental health problems in an effective way, these coping skills was helpful. By developing a more accepting attitude through MBCT towards student's homesickness and mental health experiences, students reduced the distress associated with these experiences. The national development will accelerate having youth lower mental health problems. The findings will draw the attention of policy maker to approve counseling center for every public university of Bangladesh.

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Conflict of Interest

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