

The Effect of Mindfulness-Based Cognitive Therapy on Rumination Behavior among Dormitory-Dwelling Migrant Students at Universitas Teknologi Sumbawa

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Abstract

Students living in university dormitories often experience academic and social adjustment demands that may increase psychological vulnerability, particularly in the form of rumination. Persistent rumination can negatively affect emotional regulation, stress management, and overall psychological well-being. Mindfulness-Based Cognitive Therapy (MBCT) has been recognized as an intervention that helps individuals develop present-moment awareness and reduce maladaptive repetitive thinking patterns. This study aims to determine the effectiveness of MBCT in reducing rumination levels among senior residents at the dormitory of Sumbawa University of Technology. The research employed a quasi-experimental design using a pretest-posttest control group model involving 18 senior residents divided into an experimental group ($n = 10$) and a control group ($n = 8$). The experimental group received MBCT intervention, while the control group received no treatment. Rumination levels were measured before and after the intervention using a standardized rumination scale. Descriptive statistical analysis indicated that the experimental group experienced a more consistent decrease in rumination scores compared to the control group. Furthermore, the Independent Samples t-Test revealed a significant difference between posttest scores of the experimental and control groups ($p < 0.05$), suggesting that the observed changes were associated with the intervention. These findings indicate that MBCT has significant potential as an effective psychological intervention to reduce rumination and assist students in managing psychological pressure within academically demanding environments.

Keywords: Academic Stress, Campus Mental Health, Migrant Student Adaptation, Psychological Resilience, Student Adjustment

1. Introduction

Students are in the early adult phase characterized by important developmental transitions, where individuals are faced with various academic, social, and personal demands simultaneously. The lecture process requires students to be able to adapt to academic responsibilities, build new social relationships, and develop emotional and psychological independence. Inability to manage these demands can trigger psychological pressure, especially when individuals do not yet have adaptive coping strategies.

These adaptation challenges become more complex for migrant students who must leave their families and home environments to pursue education in other regions. Separation from the main support system and adjustment to a new environment can increase vulnerability to psychological stress. In conditions of ongoing pressure, migrant students are at risk of experiencing maladaptive thought patterns, one of which is rumination, which is the tendency to be trapped in negative thoughts that are repetitive and difficult to release (Putri et al., 2023)



Based on the researcher observations in the dormitory environment of Sumbawa University of Technology, it was found that a number of migrant students showed a tendency to be absorbed in negative thoughts, had difficulty releasing themselves from the same problems, and often repeated events that were considered painful without finding adaptive solutions. Some students also expressed emotional experiences such as often crying when talk about problems, feeling trapped in repetitive conditions, and the emergence of feelings of despair because they considered the problems faced to have no way out. Therefore, a psychological approach is needed that can help students overcome rumination behavior.

One psychological approach that is considered relevant to help individuals manage rumination is Mindfulness-Based Cognitive Therapy (MBCT). This approach emphasizes the development of full and non-judgmental awareness of present experiences, so that individuals are able to observe negative thoughts without being excessively involved in them (Bukhori et al., 2023). In the context of migrant students, MBCT is seen as having potential as an adaptive strategy to help face academic and emotional pressures in a healthier way.

Despite existing studies on Mindfulness-Based Cognitive Therapy (MBCT) for reducing stress and negative thought patterns in student populations, few have specifically targeted migrant students living in university dormitories who face unique challenges such as separation from family, adjustment to a new environment, and heightened academic pressure. Additionally, prior research often focuses on general stress reduction rather than directly addressing rumination behavior, leaving a gap in understanding how MBCT can specifically mitigate repetitive negative thinking in this population. This study seeks to fill this gap by investigating the effectiveness of MBCT in reducing rumination among dormitory-residing migrant students, thereby providing practical insights for developing tailored psychological interventions in higher education settings.

Based on this background, this study aims to examine the role of Mindfulness-Based Cognitive Therapy in reducing the tendency of rumination in migrant students living in the dormitory of Sumbawa University of Technology. This research is expected to contribute to the development of psychological interventions that suit the needs of migrant students and support their mental health and adjustment process in higher education environments. The researcher proposes a hypothesis that there is an effect of mindfulness based cognitive therapy training on the reduction of rumination behavior in migrant students. After being given mindfulness based cognitive therapy training treatment, the rumination behavior of the experimental group is lower than the control group.

2. Literature Review

Quoted from Kusuma and Kurniawan (2025), rumination is a repetitive thinking pattern that focuses on negative feelings, the causes of problems, and the consequences of an event without being followed by adaptive resolution efforts. Individuals who experience rumination tend to be trapped in a cycle of repetitive negative thoughts, making it difficult to divert attention and respond to situations constructively, where this rumination becomes a major risk factor in the development and maintenance of stress, anxiety, and depression (Aldao et al., 2010)

Research conducted by Faizah & Purnomo (2019) showed that the level of rumination in the adolescent age group was higher than adult individuals. This finding shows that in the developmental phase characterized by emotional instability and immature self-regulation processes, individuals are more easily trapped in maladaptive repetitive thinking patterns. This condition has the potential to continue into early adulthood if not handled adaptively.

Migrant students, most of whom are in the late adolescent to early adult age range, are in a very vulnerable position to rumination, especially when facing academic and emotional pressures simultaneously. One intervention that has been proven effective in overcoming rumination is Mindfulness Based Cognitive Therapy (MBCT), which is a psychological intervention that refers to training individuals' ability to be fully aware of present experiences without judgment, so that individuals can observe negative thoughts without having to be involved in them. Through mindfulness based cognitive therapy, individuals are trained to observe negative thoughts without being trapped in them, so they are able to respond to problems more adaptively (Bukhori et al., 2023).

Based on research by Prinanda (2023), the practice of mindfulness based cognitive therapy has proven effective in reducing stress levels, improving emotional regulation, and reducing the tendency for repetitive negative thinking or rumination in adolescents with depressive symptoms. In addition, research conducted by Cladder-Micus et al. (2019) conclude that MBCT is effective in helping individuals develop awareness of thoughts and emotions without judging, so as to reduce ruminative thought patterns. The results of this study show that mindfulness practice combined with a cognitive approach can significantly reduce the tendency of rumination and improve emotional regulation in people with depression.

Furthermore, research by Maulaya & Baroroh (2025) revealed that mindfulness has a positive influence in reducing rumination and preventing recurrence of affective disorders, especially in individuals who are vulnerable to experiencing psychological stress. This intervention helps individuals not to be absorbed in repetitive negative thoughts by increasing the ability to decentering, which is seeing thoughts as mental events.

Nevertheless, most previous studies were more conducted on clinical populations or the general public, and have not specifically highlighted the group of migrant students. Migrant students face typical psychosocial challenges, such as separation from family, academic demands, cultural adjustment, and limited social support, which can increase vulnerability to stress and rumination. This condition makes migrant students a group at risk of experiencing psychological problems if they do not have adaptive coping strategies.

This research has clear differences from previous studies. Research by Prinanda (2023) and Cladder-Micus et al. (2019) emphasized more on the application of MBCT in depression sufferers. Meanwhile, research by Maulaya and Baroroh (2025) focused more on the application of mindfulness to forgive the past. In addition, these studies have not been widely conducted in the context of culture and educational environment in Indonesia.

3. Methods

This study uses quantitative methods with quasi experiment type (table 1), using pretest-posttest control group design, namely measurements carried out at the initial stage before giving treatment and at the final stage after treatment is given. These measurements are applied both to the experimental group that receives intervention and to the control group, thus allowing researchers to compare changes that occur due to treatment more objectively (Yuwanto, 2019).

Table 1. Research Design and Data Analysis Method

Design	Group	Case	Analysis
Quasi experiment 2	2 (Experiment vs control)	Mindfulness based cognitive therapy to reduce rumination vs without mindfulness based cognitive therapy	t-test

3.1. Instrument

In this study, researchers used two research instruments designed to measure the effect of mindfulness based cognitive therapy as an independent variable in influencing the reduction in the level of rumination as a dependent variable.

3.2. Mindfulness Based Cognitive Therapy Procedure

This study applies an experimental procedure in the form of Mindfulness-Based Cognitive Therapy intervention. The intervention is given through a series of instructions and mindfulness exercises arranged according to the MBCT framework developed by Segal et al. (2013). The intervention procedure is carried out in stages with the aim of increasing mindfulness ability and reducing the tendency of rumination in research subjects. The stages of intervention include:

- 1) Awareness and Automatic Pilot: At this stage, subjects are introduced to the concepts of awareness and automatic pilot, which is a condition when individuals carry out activities without full awareness. Subjects are trained to be present in current experiences through body scan, mindful breathing, and mindful movement exercises. This stage aims to increase concentration and awareness of body and mind conditions.
- 2) Living in Our Heads: This stage focuses on recognizing ruminative thoughts and the emotions that accompany them. Subjects are invited to identify negative thought patterns that often arise and the emotional responses they cause. Through reflective exercises and discussions, subjects learn to realize that thoughts that arise are mental activities, not facts.
- 3) Gathering the Scattered Mind: At this stage, subjects are trained to refocus attention when thoughts begin to wander. Previously learned mindfulness exercises are repeated and evaluated, including exercises carried out at home. This stage aims to improve the ability to control attention and reduce excessive involvement in rumination.
- 4) Recognising Aversion: This stage aims to help subjects recognize patterns of rejection, avoidance, or reluctance towards unpleasant experiences. Subjects are invited to observe emotional and physical reactions that arise when facing negative events, and develop an attitude of acceptance towards these experiences without judging.
- 5) Allowing / Letting Be: At this stage, subjects are trained to let thoughts and emotions be present without trying to avoid or change them. Subjects learn to observe rumination as a temporary experience, so as to reduce maladaptive automatic responses and develop flexibility in facing psychological pressure.
- 6) Things Are Not Facts: This stage emphasizes the understanding that negative thoughts do not always reflect reality. Subjects are guided to recognize cognitive distortions and separate between thoughts and facts. Through this exercise, subjects are expected to be able to reduce the impact of ruminative thoughts on emotions and behavior.
- 7) How Can I Best Take Care of Myself: At this stage, subjects are directed to develop adaptive self-care strategies. Subjects formulate positive activity plans, personal goals, and steps that can be taken when rumination arises. This stage also includes advanced mindfulness exercises, such as mindful sleeping.
- 8) Maintaining and Extending New Learning: The final stage aims to maintain and expand the skills acquired during the intervention. Subjects reflect on the changes experienced and are encouraged to apply mindfulness skills in daily life continuously, especially in facing rumination.

3.3. Rumination Scale

Rumination is measured using the Ruminative Responses Scale, RRS - 22 developed by Nolen-Hoeksema (1991) which measures the presence of negative rumination and self-reflection. This instrument consists of 22 unfavourable items. The Ruminative Response Scale (RRS) scale is a standard scale that has been proven to have good validity and reliability. In Parola et al. (2017), it shows high internal consistency of the RRS - 22 scale with Cronbach's alpha values of 0.88 - 0.92.

The instrument is arranged in the form of a Likert scale, where each statement item is equipped with response options that represent the frequency of respondents' experiences (Sugiyono, 2013). The answer categories used consist of almost never, sometimes, often, and almost always. This scale (table 2) is used to describe the extent of the tendency of rumination experienced by respondents.

Table 2. Scale Answer Categories

No	Answer	Score
1	Almost never	1
2	Sometimes	2
3	Often	3
4	Almost always	4

Thus, the total score that respondents can obtain is in the range of 22 - 88. Categorization of rumination levels (table 3) is classified into three levels, namely low, medium, and high (Nolen-Hoeksema, 1991).

Table 3. Rumination Categories

No	Rumination Category	Score
1	Low	22 - 44
2	Medium	45 - 66
3	High	67 - 88

In this study, changes in rumination were measured before intervention (pre-test) and after intervention (post-test). The decrease in rumination in this study was measured based on a decrease in RRS scores on all aspects of rumination on this scale.

3.4. Subjects

The sampling technique applied in this study is purposive sampling, which is a method of selecting research subjects based on special considerations and criteria that have been adjusted to the purpose of the study (Sugiyono, 2019). This technique is used because the study applies a quasi-experiment design, which does not allow randomization of subjects as a whole. Therefore, researchers determine samples by selecting individuals who have the following characteristics:

- 1) Migrant students living in the dormitory of Sumbawa University of Technology for more than one year (class of 2022 - 2024)
- 2) Have a medium to high level of rumination (score 20 - 40) based on pretest/initial screening results using the Ruminative Responses Scale (RRS-10)
- 3) Willing to participate in the entire series of Mindfulness Based Cognitive Therapy (MBCT) interventions.

Based on the results of descriptive statistical analysis of initial screening data on the level of rumination in 29 students, variations in the level of rumination were obtained which were divided into three categories, namely low, medium, and high. Classification results showed that as many as 10 people (34.0%) were in the high rumination category, 8 people (27.6%) were in the medium rumination category, and 11 people (37.9%) were in the low rumination category.

Table 4. Results of descriptive analysis of initial screening of rumination levels

Rumination Level Category	Number of Subjects (n)	Percentage (%)
High	10	34.0 %
Medium	8	27.6 %
Low	11	37.9 %
Total	29	%

Therefore, subjects selected as samples are individuals with medium and high levels of rumination, namely 18 people. Subjects with low levels of rumination were not included in the study because they were considered not to require intensive MBCT intervention. Then, the division of subjects into the experimental group and control group in this study was not done randomly, but using a purposive technique based on certain criteria that have been determined by the researcher, namely:

- 1) Control group: Subjects with medium rumination levels, namely 8 people
- 2) Experimental group: Subjects with high rumination levels, namely 10 people

3.5. Data Analysis

In this study, data testing was tested using Statistical Package for Social Science (SPSS) version 25 for windows. SPSS is a statistical computer program capable of managing statistical data quickly and accurately with the desired output. This data processing technique provides an explanation of the technical analysis used to solve problem formulations. Data analysis was carried out by comparing pre-test and post-test scores from rumination scales given to subjects. The collected data was then processed using SPSS version 25.0 program to assess the presence of increases, decreases, differences, or effects from the interventions that have been carried out. The statistical method used is the t-test, which is an inferential statistical method used to compare the average of two groups of data and determine whether the differences that appear are statistically significant or just coincidental (Sugiyono, 2019)

4. Results and Discussion

4.1. Research Results

Based on the results of descriptive statistical analysis of pretest and posttest data on rumination levels obtained from 18 subjects, the following description was obtained for the control and experimental groups:

Table 5. Summary of pretest - posttest score data, and rumination levels

Score data & classification of rumination levels before, after and without MBCT administration						
Subject	Pre-test	Classification	Post-test	Classification	Group	Status
SE1	68	Severe	68	Severe	Experiment	Stable
SE2	80	Severe	78	Severe	Experiment	Decreased
SE3	70	Severe	66	Medium	Experiment	Decreased
SE4	86	Severe	70	Severe	Experiment	Decreased
SE5	80	Severe	78	Severe	Experiment	Decreased
SE6	76	Severe	76	Severe	Experiment	Stable
SE7	78	Severe	72	Severe	Experiment	Decreased
SE8	84	Severe	72	Severe	Experiment	Decreased
SE9	84	Severe	70	Severe	Experiment	Decreased
SE10	82	Severe	80	Severe	Experiment	Decreased
Average	78.8	Average	72.8			
Subject	Pre-test	Classification	Post-test	Classification	Group	Status

SK1	57	Medium	54	Medium	Control	Decreased
SK2	60	Medium	59	Medium	Control	Decreased
SK3	58	Medium	56	Medium	Control	Decreased
SK4	48	Medium	52	Medium	Control	Increased
SK5	48	Medium	50	Medium	Control	Increased
SK6	60	Medium	62	Medium	Control	Increased
SK7	62	Medium	60	Medium	Control	Decreased
SK8	67	Severe	66	Medium	Control	Decreased
Average	57.5	Average	57.375			

Based on Table 5, descriptive statistical analysis shows that the experimental group consisting of 10 subjects had an average pre-test rumination score of 78.8 with severe rumination classification in all subjects. After being given Mindfulness-Based Cognitive Therapy (MBCT) intervention, the average post-test rumination score decreased to 72.8, which is still in the severe classification, but shows a general decrease in scores. Individually, eight subjects experienced a decrease in rumination scores, while two subjects showed stable scores. In addition, there was one subject who experienced a change in rumination level classification from severe to medium, indicating an improvement in rumination condition after intervention. Meanwhile, in the control group consisting of eight subjects, the average pre-test rumination score was 57.5 and changed to 57.375 in the post-test, showing a very small change. Individually, five subjects experienced a decrease in rumination scores, while three subjects experienced an increase in scores. The classification of rumination levels in the control group generally remained in the medium category, with one subject who changed from the severe category in the pre-test to medium in the post-test. Overall, these descriptive results show that the experimental group experienced a more consistent decrease in rumination scores compared to the control group, so descriptively the MBCT intervention appears to have potential in reducing the level of rumination in research subjects.

The research results show that the largest change in interference score difference from pretest and posttest occurred in subject SE4, which was 16 points. According to observational data analysis, subject SE4 who had the largest change in interference score difference from pretest and posttest appeared enthusiastic in participating in the exercises. SE4 actively asked the facilitator and followed meditation instructions well. SE4 did independent exercises in each session 3 - 4 times at night before going to bed. SE4 felt the benefits of mindfulness, such as feeling calmer, being able to focus attention, opening awareness, and reducing negative thoughts so as to be able to think more clearly.

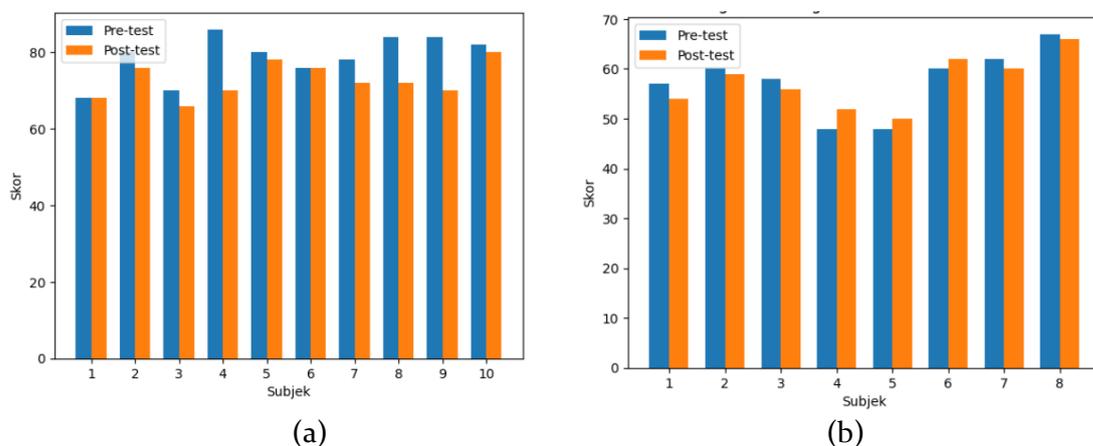


Figure 1. (a) pre posttest experiment group, (b) pre posttest control group

Table 6. T-test data analysis results

	Levene's Test for Equality of Variances		t	df	T-test for Equality of Means			95% Confidence interval of the Difference		
	F	Sig			Sig. (2-tailed)	Mean difference	Std. Error Difference	Lower	Upper	
Value	Equal variances assumed	.289	.598	6.608	16	.000	15.425	2.334	10.477	20.373
	Equal Variances not assumed			6.480	13.790	.000	15.425	2.381	10.312	20.538

Based on the results of the t-Test in table 6, a significance value of 0.000 ($p < 0.05$) was obtained, which indicates a significant difference between the posttest scores of the experimental group and the control group. Levene's test showed a significance value of 0.598 ($p > 0.05$), so it can be concluded that the variance of both groups is homogeneous and the analysis uses the assumption of equal variance. The average posttest score of the experimental group ($M = 72.80$; $SD = 4.541$) was higher than the control group ($M = 57.38$; $SD = 5.370$). This shows that the treatment given to the experimental group had a significant effect on increasing scores.

4.2. Discussion

The results of this study demonstrate a significant reduction in rumination levels among subjects who received Mindfulness-Based Cognitive Therapy (MBCT). Although post-intervention scores in the experimental group remained within the severe category, the observed decrease indicates that MBCT effectively helps individuals manage repetitive negative thinking and psychological pressure. This finding supports the theoretical perspective that addressing maladaptive cognitive patterns requires both external coping strategies and opportunities for individuals to process emotional experiences internally. By fostering present-moment awareness and non-judgmental observation of thoughts, MBCT provides a structured method for individuals to disengage from automatic rumination, consistent with the cognitive-behavioral underpinnings of the intervention (Oberoi, 2024).

The significant difference in outcomes between the experimental and control groups confirms that the observed changes were attributable to the intervention rather than natural adaptation over time or external conditions. This finding aligns with prior empirical studies that demonstrate MBCT's effectiveness in reducing rumination and associated depressive symptoms among student populations and other non-clinical groups (Cano-Lopez et al., 2022; Kaviani et al., 2011). Specifically, the results corroborate evidence that structured mindfulness interventions enhance cognitive flexibility, emotional regulation, and attentional control, enabling participants to respond adaptively to stressors rather than becoming trapped in repetitive negative thinking.

Furthermore, the study extends previous research by focusing on migrant students living in dormitory settings, a population that faces unique stressors including separation from family, adjustment to new social environments, and academic demands. Previous studies on general student populations or clinical groups rarely address the dormitory context, highlighting the unique contribution of the present study. The findings suggest that MBCT can serve as a practical, low-cost, and accessible intervention that complements existing mental health support in higher education environments. Students gain not only measurable reductions in rumination but also skills for ongoing self-regulation and emotional processing, which are critical for long-term psychological resilience.

From a practical perspective, the results indicate that MBCT may be implemented in academic and residential settings as part of student support programs, workshops, or short-term training interventions. By providing students with structured mindfulness tools, educators and counselors can enhance students' capacity to manage academic stress and emotional challenges, particularly in populations susceptible to rumination. This aligns with the broader literature emphasizing early and preventive mental health interventions as effective means to reduce maladaptive cognitive patterns and promote psychological well-being (Langer et al., 2017).

In conclusion, this study not only confirms the effectiveness of MBCT in reducing rumination but also extends its application to migrant student populations in dormitory environments. The findings highlight the theoretical and practical relevance of mindfulness-based interventions in fostering cognitive and emotional resilience, offering evidence to inform future mental health programs tailored to the needs of students in higher education.

5. Conclusion

This study provides evidence that Mindfulness-Based Cognitive Therapy (MBCT) can effectively reduce rumination among migrant students residing in the dormitory of Sumbawa University of Technology. The intervention not only helped students disengage from repetitive negative thinking but also fostered greater awareness and adaptive management of psychological stress in an academic context. These findings highlight the potential of MBCT as a structured approach that addresses both cognitive and emotional aspects of stress, supporting theoretical frameworks that emphasize the role of mindfulness in enhancing cognitive flexibility and emotional regulation. From a practical perspective, the study underscores the value of incorporating mindfulness-based interventions into higher education mental health programs. Short-term, structured MBCT sessions can serve as a low-cost, accessible strategy for supporting students who face unique adaptation challenges, such as separation from family, adjustment to new social environments, and heightened academic pressures. By equipping students with tools for self-regulation and reflective processing, educational institutions can complement existing counseling services and proactively promote psychological resilience.

Nevertheless, several limitations should be acknowledged. The study involved a relatively small sample of 18 participants from a single dormitory, which may limit the generalizability of the findings. Additionally, the study employed a short-term intervention without follow-up assessments, leaving questions about the durability of the effects over time. Future research could address these limitations by involving larger and more diverse student populations, implementing longitudinal designs, and comparing MBCT with alternative psychological interventions to assess relative effectiveness. In conclusion, this study contributes to both theory and practice by demonstrating that MBCT is a promising approach for reducing rumination and promoting adaptive coping in academic environments. Future research and program development can build on these findings to create comprehensive mental health strategies tailored to the specific needs of migrant and high-stress student populations.

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