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The Effect of Mindfulness-Based Therapy on Anxiety Levels in Patients with Anxiety Disorders

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Abstract

Anxiety disorders are among the most common mental health problems worldwide, often leading to impaired quality of life and decreased functioning. Conventional pharmacological treatments are effective but may present side effects and limited long-term adherence. Mindfulness-Based Therapy (MBT) has emerged as a promising non-pharmacological intervention, focusing on awareness and acceptance of thoughts and emotions to reduce anxiety symptoms. This study aimed to evaluate the effectiveness of MBT in reducing anxiety levels among patients with clinically diagnosed anxiety disorders. A quasi-experimental design with pre-test and post-test control groups was conducted at a psychiatric outpatient clinic in Yogyakarta, Indonesia, from January to June 2024. A total of 80 patients were recruited and randomly assigned to either the intervention group (MBT, n=40) or the control group (standard care, n=40). The Beck Anxiety Inventory (BAI) was used to measure anxiety levels before and after the intervention. Results showed a significant reduction in anxiety scores in the MBT group compared to the control group ($p < 0.01$). These findings indicate that MBT is an effective complementary intervention for reducing anxiety symptoms and can be integrated into routine clinical practice. Future studies should explore long-term outcomes and its applicability across diverse populations.

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Introduction

Anxiety disorders are recognized as one of the most prevalent mental health issues globally, affecting approximately 301 million individuals in 2019 according to the World Health Organization (WHO, 2022). These conditions are characterized by excessive fear, worry, and behavioral disturbances that interfere with daily functioning and overall quality of life. While pharmacological interventions and cognitive behavioral therapy (CBT) remain the most widely used treatments, many

patients experience limited access, side effects, or difficulties in sustaining long-term adherence (Hofmann et al., 2017; Tang et al., 2015).

Recent literature highlights the growing importance of complementary and alternative therapies in mental health care. Among these, mindfulness-based therapy (MBT) has gained attention as a structured psychological intervention that cultivates present-moment awareness and non-judgmental acceptance of thoughts and emotions (Kabat-Zinn, 2015). MBT interventions, such as Mindfulness-Based Stress Reduction (MBSR) and Mindfulness-Based Cognitive Therapy (MBCT), have demonstrated positive outcomes in reducing symptoms of depression, stress, and anxiety across clinical and non-clinical populations (Spijkerman et al., 2016;Khoury et al., 2015).

Despite these promising findings, research gaps remain, particularly regarding the effectiveness of MBT specifically for patients with clinically diagnosed anxiety disorders in Asian populations. While studies in Western contexts suggest that MBT can significantly reduce anxiety symptoms (Blanck et al., 2018), cultural differences may influence the acceptance and efficacy of mindfulness practices. Therefore, it is crucial to investigate its applicability within local healthcare systems in Asia, where traditional beliefs and treatment preferences may differ (Chiesa & Serretti, 2016).

In Indonesia, anxiety disorders are among the leading mental health issues, yet treatment gaps remain wide due to stigma, limited access to psychotherapy, and reliance on pharmacological approaches (Ministry of Health RI, 2021). Integrating MBT into psychiatric services may offer a low-cost, accessible, and culturally adaptable solution for addressing unmet needs in mental health care.

This study was designed to address these gaps by evaluating the effectiveness of MBT in reducing anxiety symptoms among patients with clinically diagnosed anxiety disorders. The research builds on prior evidence while providing new insights relevant to Southeast Asian healthcare settings (Davidson & Kaszniak, 2015).

The main research question of this study is: Does mindfulness-based therapy significantly reduce anxiety levels in patients with anxiety disorders compared to standard care? The findings are expected to provide evidence for the inclusion of MBT in clinical practice as a complementary treatment option (Demarzo et al., 2015).

Furthermore, the study contributes to theoretical and practical discussions by examining the mechanisms through which mindfulness interventions reduce anxiety. Prior research suggests that mindfulness improves emotional regulation, decreases rumination, and fosters resilience against stress (Gu et al., 2015). Testing these outcomes in diverse cultural contexts enriches global understanding of MBT's clinical value.

Ultimately, this study aims not only to demonstrate the effectiveness of MBT but also to advocate for its integration into mental health systems in Indonesia and other Asian countries, contributing to more holistic, culturally sensitive approaches to treating anxiety disorders.

Materials and Methods

Study Design and Setting

This study employed a quasi-experimental design using a pre-test and post-test control group approach. The research was conducted at a psychiatric outpatient clinic in Yogyakarta, Indonesia, over a six-month period from January to June 2024. This design was selected to evaluate the effectiveness of mindfulness-based therapy in reducing anxiety levels while maintaining ethical and practical feasibility in a clinical setting.

Participants and Sampling

The study population consisted of adult patients who had been clinically diagnosed with anxiety disorders based on the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition criteria.

Participants were recruited using purposive sampling from patients receiving outpatient psychiatric services during the study period.

A total of 80 eligible participants were enrolled and subsequently assigned into two groups: an intervention group receiving mindfulness-based therapy and a control group receiving standard psychiatric care. Each group included 40 participants. Group assignment was conducted to ensure comparability between the intervention and control groups at baseline.

Intervention Procedure

The intervention consisted of an eight-week mindfulness-based therapy program adapted from the Mindfulness-Based Stress Reduction framework developed by Kabat-Zinn. The program was delivered through weekly group sessions lasting 120 minutes each. All sessions were facilitated by trained mental health professionals with experience in mindfulness-based interventions.

The therapy sessions included guided mindfulness meditation, body scan exercises, focused breathing techniques, and psychoeducation related to anxiety management. Participants were encouraged to apply mindfulness practices to everyday situations involving stress and anxiety. In addition to in-session activities, participants were instructed to practice mindfulness exercises independently at home for a minimum of 20 minutes per day throughout the intervention period.

The control group continued to receive standard psychiatric care as routinely provided by the clinic, without additional psychological interventions related to mindfulness.

Measurement Instrument

Anxiety levels were measured using the Beck Anxiety Inventory, a widely validated self-report instrument designed to assess the severity of anxiety symptoms. The instrument consists of multiple items that evaluate both cognitive and somatic aspects of anxiety. The Beck Anxiety Inventory has demonstrated strong reliability and validity in clinical populations and is commonly used in anxiety-related research.

Assessments were conducted at two time points for both groups. The first assessment occurred prior to the implementation of the intervention to establish baseline anxiety levels. The second assessment was administered at the end of the eight-week intervention period to evaluate changes in anxiety symptoms.

Data Analysis

Data analysis was performed using statistical software. Descriptive statistics were used to summarize participant characteristics and baseline anxiety levels. Paired t-tests were conducted to examine within-group differences between pre-test and post-test anxiety scores. Independent t-tests were used to compare post-intervention anxiety scores between the intervention and control groups.

Statistical significance was determined at a threshold of $p < 0.05$. This analytical approach allowed for an objective evaluation of the effectiveness of mindfulness-based therapy while maintaining consistency with the study design and research objectives.

Ethical Considerations

Ethical approval for the study was obtained from the relevant institutional review board. All participants provided informed consent prior to participation. Confidentiality and anonymity were maintained throughout the research process, and participants were informed of their right to withdraw from the study at any time without consequences to their treatment.

Results and Discussion

Results

The data analysis indicates that mindfulness-based therapy (MBT) had a significant effect on reducing anxiety levels among patients diagnosed with anxiety disorders. Anxiety was measured using the Beck Anxiety Inventory (BAI) at two time points, prior to the intervention and after eight weeks of treatment.

Participants in the intervention group who received MBT demonstrated a statistically significant reduction in anxiety scores following the intervention compared to baseline measurements. In contrast, the control group, which received standard psychiatric care, showed no meaningful change between pre-test and post-test scores.

Paired t-test analysis within the MBT group yielded a significance value of $p < 0.01$, indicating a substantial decrease in anxiety levels after the intervention. Independent t-test analysis further confirmed a significant difference in post-intervention anxiety scores between the MBT group and the control group.

Table 1. Comparison of Anxiety Level Changes by Study Group

Study Group	Sample Size (n)	Direction of BAI Score Change	Statistical Result
MBT	40	Significant decrease	$p < 0.01$
Control	40	No significant change	$p > 0.05$

The table clearly demonstrates that a consistent reduction in anxiety levels occurred only in the group receiving mindfulness-based therapy.

Discussion

The findings of this study provide empirical evidence that mindfulness-based therapy is an effective psychological intervention for reducing anxiety symptoms in patients with anxiety disorders. The significant reduction in BAI scores observed in the MBT group indicates that structured mindfulness training positively influences emotional and cognitive processes associated with anxiety.

From a theoretical perspective, these results are consistent with the mindfulness-based emotion regulation framework, which emphasizes enhanced awareness of internal experiences without excessive emotional reactivity (Gu et al., 2015). Through mindfulness practice, individuals learn to observe anxious thoughts as transient mental events rather than threats requiring avoidance. This process disrupts maladaptive patterns of rumination and emotional reactivity that characterize anxiety disorders (Arch & Craske, 2016).

The present findings also align with previous meta-analytical evidence demonstrating the effectiveness of mindfulness-based interventions in reducing anxiety symptoms among clinical populations (Khoury et al., 2015; Hofmann et al., 2017). The observed improvements suggest that MBT facilitates adaptive cognitive processing by fostering acceptance and attentional control, as proposed in the monitor and acceptance theory of mindfulness (Lindsay & Creswell, 2017).

Neuropsychological models further support these outcomes. Mindfulness practice has been associated with increased prefrontal cortex regulation and reduced amygdala reactivity, which together contribute to improved emotional regulation and decreased anxiety responses (Hölzel et al., 2016). In line with the conceptual framework described by Davidson and Kaszniak (2015), the significant reduction in anxiety scores observed in this study likely reflects these underlying regulatory mechanisms.

Cultural context also plays an important role in interpreting the findings. The effectiveness of MBT in an Indonesian clinical setting suggests that mindfulness-based interventions are culturally adaptable and applicable beyond Western populations. Mindfulness practices may align well with

reflective and contemplative traditions commonly found in Asian cultures, which can enhance participant engagement and adherence to treatment (Chiesa & Serretti, 2016).

From a clinical standpoint, the results highlight the potential of MBT as a complementary intervention in psychiatric outpatient services. Compared to pharmacological treatment alone, MBT offers a low-cost, non-invasive approach that can be delivered in group formats and supports long-term self-regulation skills. These characteristics make MBT particularly suitable for mental health systems with limited access to intensive psychotherapy services (Kuyken et al., 2016).

Nevertheless, several limitations should be acknowledged. The quasi-experimental design limits full control over potential confounding variables, despite the presence of a comparison group. In addition, the reliance on self-report measures such as the BAI introduces the possibility of response bias. The absence of long-term follow-up also prevents conclusions regarding the durability of treatment effects (Segal et al., 2018). However, the consistency of the findings with existing literature strengthens the credibility of the results.

Overall, the results and discussion demonstrate that mindfulness-based therapy is an effective, culturally relevant, and clinically applicable intervention for anxiety disorders. The findings contribute to the growing body of evidence supporting mindfulness-based approaches in mental health care and reinforce their role within integrative and patient-centered treatment models.

Conclusion

This study demonstrates that mindfulness-based therapy effectively reduces anxiety levels among patients with clinically diagnosed anxiety disorders. Participants who received the mindfulness-based intervention showed a statistically significant decrease in anxiety scores compared to those who received standard psychiatric care. These findings confirm that structured mindfulness training provides measurable psychological benefits within a clinical setting.

The results support established theoretical frameworks that describe mindfulness as a mechanism for improving emotional regulation and reducing maladaptive cognitive patterns associated with anxiety. By fostering present-moment awareness and non-judgmental acceptance, mindfulness-based therapy enables patients to manage anxious thoughts and emotional responses more effectively. This therapeutic process contributes to reduced symptom severity and improved psychological functioning.

From a clinical perspective, the findings highlight the value of integrating mindfulness-based therapy as a complementary approach within psychiatric outpatient services. The intervention is cost-efficient, non-invasive, and suitable for group-based implementation, making it a practical option for mental health systems with limited resources. Its cultural adaptability further enhances its relevance for implementation in diverse healthcare contexts, including Indonesia.

Despite the positive outcomes, the study is limited by its quasi-experimental design and reliance on self-report measures. Future research should focus on randomized controlled trials and long-term follow-up to assess the sustainability of treatment effects. Overall, this study provides strong empirical support for the inclusion of mindfulness-based therapy in comprehensive and patient-centered anxiety treatment programs.

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