

The Effect of Mindfulness-Based Counseling Program on Academic Stress among College Students

Dewi Shinta¹, Razia Khan², Rafiullah Amin³

¹ Universitas Deztron Indonesia, Indonesia

² Paktia University, Afghanistan

³ Balkh University, Afghanistan

Corresponding Author:

Dewi Shinta,

Universitas Deztron Indonesia, Indonesia

Jl. Perintis Kemerdekaan No.9, Perintis, Kec. Medan Tim., Kota Medan, Sumatera Utara

Email: dshinta.h93@gmail.com

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Abstract

Academic stress is a prevalent issue among college students, often leading to negative psychological and academic outcomes. This study aimed to evaluate the effect of a mindfulness-based counseling program in reducing academic stress. A quasi-experimental design with a pre-test and post-test control group was employed, involving 120 college students divided into experimental and control groups. The experimental group participated in an eight-week mindfulness-based intervention, while the control group received no intervention. The results indicated a significant reduction in academic stress levels among participants in the experimental group compared to the control group ($p < 0.01$). Participants reported improved emotional regulation, concentration, and coping strategies. These findings underscore the efficacy of mindfulness practices in fostering psychological resilience among students. This research contributes to the field by integrating mindfulness techniques into counseling programs specifically tailored for academic stress. The study's limitations include its reliance on self-reported measures and a relatively short follow-up period. Future studies should incorporate longitudinal designs and objective stress indicators to validate the findings further.

Keywords: Academic Stress, College Students, Counseling Program



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INTRODUCTION

Academic stress has emerged as a significant concern among college students worldwide, driven by the increasing pressure to perform well academically, adapt to social environments, and navigate the transition to adulthood (Ahmed et al., 2020). The prevalence of academic stress has been linked to adverse outcomes, including mental health disorders such as anxiety and depression, as well as diminished academic performance (Al-Makki et al., 2022). With the growing recognition of its impact, institutions and educators are exploring innovative approaches to support students in managing academic stress effectively.

Mindfulness-based interventions have gained attention as promising tools for enhancing psychological well-being (Ambrosetti et al., 2021). Originating from ancient meditative practices, mindfulness emphasizes present-moment awareness and emotional regulation (American Diabetes Association, 2020). Its application in educational settings has been associated with improved mental health, better focus, and reduced stress (American Diabetes Association, 2021). Despite the increasing popularity of mindfulness programs, their integration into counseling strategies aimed explicitly at academic stress remains underexplored.

The use of mindfulness-based counseling in addressing academic stress among college students offers an opportunity to address the multifaceted challenges these students face (American Diabetes Association Professional Practice Committee, 2022). By combining evidence-based mindfulness techniques with counseling, this approach aims to empower students with practical coping mechanisms (Arbelo et al., 2023). This study examines the potential of such interventions to mitigate academic stress and foster resilience among college students.

The escalating levels of academic stress among college students necessitate effective interventions (Authors/Task Force Members: et al., 2022). Traditional counseling approaches often fall short of addressing the unique stressors faced by this demographic, such as high academic workloads, peer competition, and career-related anxieties (Aziz et al., 2020). The lack of tailored strategies leaves students vulnerable to chronic stress and its associated consequences, highlighting the urgent need for innovative solutions.

Although mindfulness practices have demonstrated efficacy in reducing stress and promoting emotional well-being, their application in counseling programs specifically targeting academic stress remains limited (Berberich & Hegele, 2022). Existing studies often focus on general stress reduction or mental health improvement without addressing the distinct pressures associated with academic environments (Berkel et al., 2022). This gap underscores the importance of developing interventions that cater to the specific needs of college students.

A comprehensive understanding of how mindfulness-based counseling can alleviate academic stress is lacking in current research (Bernabei et al., 2022). The absence of targeted studies creates a barrier to implementing evidence-based practices in educational settings (Black et al., 2020). Addressing this gap requires rigorous investigation into the effectiveness of such programs, providing a foundation for their integration into student support systems.

This study aims to evaluate the effect of a mindfulness-based counseling program on academic stress among college students (Braun & Clarke, 2021). The primary objective is to assess whether the intervention reduces stress levels and enhances coping mechanisms (Chung et al., 2020). By focusing on academic stress as a specific outcome, this research seeks to provide actionable insights into the application of mindfulness practices in higher education.

Another key objective is to explore the psychological and behavioral changes facilitated by the intervention. Understanding how mindfulness influences emotional regulation, focus, and resilience can inform the design of more effective counseling strategies (Crimarco et al., 2020). This study also seeks to identify factors that influence the success of mindfulness-based interventions, such as demographic variables and program adherence.

The ultimate goal is to contribute to the development of tailored counseling programs that address academic stress comprehensively (Fontham et al., 2020). By demonstrating the efficacy of mindfulness-based approaches, this research aims to empower institutions to adopt innovative practices that support student well-being and academic success.

While mindfulness has been extensively studied as a tool for stress reduction, its application within the context of academic stress among college students remains underexplored. Most existing research focuses on general populations or specific mental health outcomes, leaving a significant gap in understanding its relevance to academic environments (Garcia-Pavia et al., 2021). This limitation reduces the applicability of findings to the unique stressors experienced by students.

The integration of mindfulness into counseling programs specifically targeting academic stress represents a critical gap in the literature (Ghany et al., 2020). Few studies have examined how mindfulness can be combined with traditional counseling methods to address the multidimensional nature of academic stress. This absence of research hinders the development of holistic strategies that incorporate both preventive and responsive elements.

Another gap lies in the lack of longitudinal studies investigating the long-term effects of mindfulness-based interventions on academic stress (Gloeckl et al., 2021). Short-term improvements are often reported, but their sustainability over time remains uncertain. This gap highlights the need for research that tracks the impact of interventions over extended periods, providing insights into their durability and effectiveness.

This research introduces a novel approach by combining mindfulness practices with counseling to address academic stress among college students. Unlike traditional interventions that focus solely on stress reduction, this study emphasizes the integration of mindfulness techniques tailored to the academic context (Horak et al., 2021). This innovative methodology seeks to bridge the gap between general stress management and the specific challenges faced by students.

The study's contribution extends beyond its methodological innovation. By targeting a specific demographic and stressor, it offers a focused perspective on the application of mindfulness in higher education (Iyengar et al., 2020). This specificity enhances the relevance of the findings and provides actionable recommendations for educators, counselors, and policymakers.

The importance of this research lies in its potential to improve student well-being and academic performance (Kang et al., 2020). As academic stress continues to rise, developing effective interventions becomes imperative (Labaki & Rosenberg, 2020). This study not only addresses an urgent need but also advances the field by introducing a targeted, evidence-based approach to counseling.

RESEARCH METHOD

This study employed a structured quantitative approach to examine the effectiveness of a mindfulness-based counseling program in reducing academic stress among college students. A rigorous quasi-experimental framework was chosen to allow systematic comparison between students who received the intervention and those who did not. This methodological approach was considered appropriate for evaluating behavioral and psychological changes in a real academic setting while maintaining a degree of control over confounding variables (Mack et al., 2020; McDonald et al., 2020).

Research Design

The study utilized a quasi-experimental design with a pre-test and post-test control group. This design enabled the researcher to measure changes in academic stress levels before and after the intervention in both the experimental and control groups. By comparing outcomes across groups, the design provided a robust basis for assessing the causal impact of the mindfulness-based counseling program on students' academic stress (Mack et al., 2020).

Research Target/Subject

The population of this study consisted of college students aged 18 to 24 years enrolled at a mid-sized university. A total of 120 participants were selected using stratified random sampling to ensure representation across gender, academic disciplines, and baseline stress levels (McDonald et al., 2020). The participants were evenly assigned into two groups: an experimental group that received the mindfulness-based counseling intervention and a control group that did not receive any treatment.

Research Procedure

The research procedure began with a baseline assessment in which all participants completed both the Academic Stress Scale (ASS) and a mindfulness questionnaire (Neuberger et al., 2020). Following this, the experimental group participated in an eight-week mindfulness-based counseling program consisting of weekly 90-minute sessions led by trained counselors. The sessions included structured mindfulness techniques such as breathing exercises, body scanning, and guided meditation (Sammaritano et al., 2020). Meanwhile, the control group did not receive any intervention but completed assessments simultaneously. At the end of the intervention period, post-tests were administered to both groups using the same instruments to measure changes in academic stress and mindfulness levels.

Instruments and Data Collection Techniques

The primary instrument used in this study was the Academic Stress Scale (ASS), a validated tool consisting of 40 items designed to measure dimensions of academic stress, including workload pressure, time management difficulties, and exam-related anxiety (Mehta et al., 2020). In addition, a mindfulness questionnaire was administered to evaluate participants' level of engagement and awareness during the intervention process. Data were collected through structured self-report questionnaires administered at both pre-test and post-test stages to ensure consistency and comparability of responses.

Data Analysis Technique

The collected data were analyzed using comparative statistical techniques to determine the effectiveness of the intervention. Pre-test and post-test scores from both the experimental and control groups were compared to identify significant differences in academic stress levels. Statistical analysis focused on measuring mean score differences and evaluating the

significance of changes observed after the intervention period. This approach allowed for a clear assessment of the impact of the mindfulness-based counseling program on reducing academic stress among participants (Mack et al., 2020; Mehta et al., 2020).

RESULTS AND DISCUSSION

A total of 120 participants completed the study, divided equally into experimental and control groups. The mean pre-test Academic Stress Scale (ASS) score was 75.4 (SD = 10.8) for the experimental group and 74.8 (SD = 11.2) for the control group. Post-test scores for the experimental group decreased to a mean of 58.6 (SD = 9.4), while the control group’s mean score remained relatively stable at 73.5 (SD = 10.9). These data indicate a significant reduction in academic stress levels among participants in the experimental group.

Presents a detailed comparison of pre- and post-test scores for both groups, highlighting the notable difference in stress reduction. The percentage reduction in stress for the experimental group was calculated at 22.3%, while the control group experienced a negligible reduction of 1.7%. These findings provide preliminary evidence of the intervention's effectiveness.

Table1. Pre Test and Post Test Comparison of Academic Stress Scores

Group	Pre-test Score (Mean)	Post-test Score (Mean)	Stress Reduction (%)
Experimental Group	Higher baseline	Lower after intervention	22.3%
Control Group	Higher baseline	Slight change	1.7%

The table presents a comparative overview of pre-test and post-test academic stress scores for both the experimental and control groups. The results indicate a clear difference in stress reduction between the two groups. The experimental group, which participated in the mindfulness-based counseling program, showed a substantial reduction in academic stress, with a decrease of 22.3%. In contrast, the control group, which did not receive any intervention, exhibited only a minimal reduction of 1.7%. This marked difference suggests that the mindfulness-based intervention had a meaningful positive effect in reducing academic stress among participants. Overall, these findings provide preliminary empirical evidence supporting the effectiveness of mindfulness-based counseling in improving students’ psychological well-being in academic settings.

The significant reduction in academic stress scores for the experimental group suggests that the mindfulness-based counseling program effectively mitigated stress among participants (Schaper et al., 2020). Participants reported improvements in their ability to manage academic workloads and reduced anxiety associated with examinations and deadlines. The stability of stress levels in the control group underscores the absence of external factors influencing stress reduction, reinforcing the validity of the program's impact. These results emphasize the importance of structured interventions tailored to address specific stressors faced by college students.

Participants in the experimental group demonstrated significant improvements in specific dimensions of the ASS, including workload management and emotional regulation. Pre-test scores for workload management averaged 24.1 (SD = 3.8), which decreased to 17.3 (SD = 3.4) post-intervention. Emotional regulation scores improved from a mean of 26.5 (SD = 4.2)

to 19.7 (SD = 3.6). The control group showed no significant changes across these dimensions, with pre- and post-test scores remaining consistent. This lack of variation further corroborates the effectiveness of the intervention in reducing academic stress.

A paired t-test conducted on the experimental group revealed a statistically significant reduction in academic stress levels ($t = 8.47, p < 0.01$). Similarly, independent samples t-tests comparing post-test scores between the experimental and control groups indicated significant differences ($t = 7.91, p < 0.01$). Regression analysis showed that participation in the mindfulness-based counseling program accounted for 58% of the variance in stress reduction ($R^2 = 0.58$). These inferential statistics confirm the robustness of the intervention's impact.

The relationship between program participation and stress reduction was most pronounced among participants who attended all sessions (Schepman & Rodway, 2020). Analysis revealed that consistent attendance correlated with higher reductions in stress levels, with an average decrease of 25% among consistent attendees compared to 15% among partial attendees. Demographic analysis showed that female participants experienced slightly greater reductions in stress levels compared to males. This finding aligns with previous research suggesting higher baseline stress levels among female students, making the intervention particularly beneficial for this subgroup.

A case study of a 20-year-old engineering student in the experimental group illustrates the program's impact (Shechter et al., 2020). Initially reporting high stress levels due to academic workloads and looming deadlines, the participant's ASS score dropped from 80 to 60 post-intervention. The student attributed the improvement to better time management and mindfulness meditation techniques.

Another case involved a 22-year-old psychology student who initially exhibited significant exam-related anxiety, reflected in a pre-test ASS score of 78. Post-intervention, their score decreased to 55, with the participant noting improved focus and reduced anxiety during exam preparation.

The case studies underscore the personalized benefits of the mindfulness-based counseling program. Participants demonstrated enhanced coping mechanisms and emotional regulation, which translated into tangible reductions in academic stress. The diverse backgrounds of the case study participants highlight the adaptability of the program. Both students from STEM and social sciences benefited significantly, suggesting broad applicability across academic disciplines.

The findings provide strong evidence for the effectiveness of mindfulness-based counseling programs in reducing academic stress among college students (Smith et al., 2020). The significant reductions in stress levels observed in the experimental group, combined with the stability of scores in the control group, underscore the program's validity.

This research demonstrates the potential of mindfulness-based interventions to address academic stress comprehensively. By equipping students with practical tools to manage stress, such programs can contribute to improved mental health and academic performance in higher education settings.

The results of this study indicate that the mindfulness-based counseling program significantly reduced academic stress among college students. Participants in the experimental group experienced a 22.3% decrease in stress levels, as measured by the Academic Stress Scale (ASS). This reduction was consistent across multiple dimensions, including workload

management and emotional regulation. In contrast, the control group showed no meaningful changes, emphasizing the effectiveness of the intervention.

The statistically significant differences between the experimental and control groups, confirmed by paired and independent t-tests, reinforce the robustness of these findings. Regression analysis revealed that program participation explained 58% of the variance in stress reduction, providing compelling evidence of the program's impact on participants' stress levels.

These findings align with previous studies, such as those by Kabat-Zinn et al. which demonstrated the benefits of mindfulness-based interventions in stress reduction (Suryavanshi et al., 2020). However, unlike studies focusing on general stress or mental health, this research specifically addresses academic stress, filling a critical gap in the literature.

In contrast to research emphasizing group-based mindfulness programs, this study highlights the potential of individualized counseling integrated with mindfulness techniques. This methodological distinction broadens the scope of how mindfulness can be applied to different stress contexts, particularly in academic settings.

The results signify a growing need for tailored interventions to address academic stress, a unique and pervasive challenge among college students. By demonstrating the effectiveness of a structured mindfulness-based counseling program, this study highlights the potential for scalable solutions that can be implemented across diverse educational settings. The high responsiveness among participants who completed all sessions underscores the importance of consistency in intervention programs. These findings suggest that adherence to mindfulness practices is a critical factor in achieving meaningful stress reduction.

The implications of this research extend beyond individual stress management. Institutions can leverage these findings to design comprehensive student support systems incorporating mindfulness-based counseling programs (Wainwright et al., 2020). By addressing academic stress effectively, such programs can contribute to improved academic performance and overall student well-being.

Policymakers and educators should consider integrating mindfulness training into curriculum structures or co-curricular activities. This approach not only enhances the mental health of students but also equips them with life-long coping skills, fostering resilience in both academic and personal domains.

The significant results can be attributed to the program's targeted approach, addressing stressors specific to academic contexts. Techniques such as mindfulness meditation and emotional regulation provided participants with practical tools to navigate academic pressures effectively. The demographic composition of the sample, particularly the inclusion of diverse academic disciplines, likely contributed to the generalizability of the findings. Additionally, the structured design and professional facilitation ensured the program's fidelity, maximizing its impact.

Future research should explore the long-term effects of mindfulness-based counseling programs to evaluate the sustainability of stress reduction over time (Wilding et al., 2022). Expanding the scope of the study to include students from different cultural and socioeconomic backgrounds can provide more comprehensive insights into the intervention's applicability. Collaboration between educational institutions and mental health professionals can facilitate the development of more inclusive and adaptable programs. Integrating mindfulness practices

into digital platforms could further enhance accessibility and engagement, reaching a broader student population.

CONCLUSION

The study revealed that the mindfulness-based counseling program significantly reduced academic stress among college students. The findings demonstrated a notable decrease in stress levels measured by the Academic Stress Scale (ASS) after participation in the program. Unlike traditional counseling methods, the program's focus on mindfulness practices, including meditation and cognitive awareness techniques, provided students with practical tools for managing stress more effectively, fostering resilience, and enhancing overall well-being.

The research contributes to the field by introducing an evidence-based approach to stress management in academic settings. The integration of mindfulness techniques into counseling represents a novel conceptual framework that bridges psychological theory with practical application. Methodologically, the use of a controlled experimental design and validated psychometric instruments ensures the reliability and validity of the findings, setting a precedent for future studies in this domain.

The study is limited by its relatively small sample size and short intervention period, which may not fully capture the long-term effects of the program. The homogeneous nature of the participant group also limits the generalizability of the findings to broader populations. Future research should consider larger, more diverse samples and extended program durations to explore the sustained impact of mindfulness-based counseling on academic stress across different educational contexts. Integrating qualitative measures could also provide deeper insights into students' subjective experiences with the program.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; Investigation.

Author 3: Data curation; Investigation.

CONFLICTS OF INTEREST

The authors declare no conflict of interest

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