

Mindfulness and Education: Effect on Focus and Academic Stress in University Students

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ABSTRACT This study investigated the impact of mindfulness practices on academic stress and focus among 60 university students at Hafr Al-Batin University. Participants were divided into a mindfulness intervention group and a control group in a quasi-experimental design. The intervention included eight sessions of various mindfulness techniques. Data were collected through questionnaires pre- and post-intervention and analysed using SPSS. The results indicated a significant decrease in stress levels (mean from 4.5 to 3.1) and increase in focus (mean from 3.2 to 4.6) in the intervention group, whereas the control group showed minimal changes. Statistical analysis confirmed the significance of these findings ($p < 0.01$ for stress, $p < 0.05$ for focus). The intervention group reported noticeable improvements in mental health and focus compared to the control group, with positive feedback on the program. These results suggest that mindfulness is an effective tool for enhancing mental health and academic performance.

INTRODUCTION

The increasing importance of mental health in education cannot be overstated, especially in the context of higher education where students are often under significant academic and social pressures (Weare 2019). In recent years, there has been a surge in awareness regarding the mental well-being of students and its direct impact on their academic performance and overall quality of life (Hj Ramli et al. 2018). With reports indicating a rise in mental health issues among university students, including stress, anxiety, and depression, the need to address these challenges is more critical than ever (Burger and Lockhart 2017). This heightened focus on mental health has led educators and researchers to explore various interventions, with mindfulness emerging as a promising approach to enhance student well-being and academic success (Galante et al. 2018).

Mindfulness, a practice rooted in ancient traditions, has gained substantial attention in the modern world for its potential to improve mental and physical health (Ergas and Hadar 2019). At its core, mindfulness involves paying full attention to the present moment with an attitude of openness and non-judgment (Schwind et al. 2017). This practice often includes meditation, deep breathing, and aware-

ness exercises. In the realm of education, mindfulness is not merely about reducing stress, but also about cultivating a mental state that enhances focus, clarity, and an increased capacity for learning (Egan et al. 2022). By training the mind to be more attentive and less reactive, mindfulness can significantly alter the way students engage with their academic and personal lives (De la Fuente et al. 2018).

The integration of mindfulness into the academic context is an innovative approach aimed at enhancing the educational experience and outcomes for students (Weare 2019). Across various universities, mindfulness programs have been introduced to help students manage stress, improve concentration, and foster a positive learning environment (Galante et al. 2018). These initiatives range from formal courses and workshops to integrating mindfulness exercises into the classroom setting. The rationale behind these programs is clear, that is, if students are less stressed and more focused, they are likely to perform better academically and enjoy a more fulfilling university experience (Egan et al. 2022).

The link between mindfulness and focus is particularly relevant in an educational setting where concentration is crucial (Burger and Lockhart 2017). Research has shown that mindfulness train-

ing can significantly improve attention and focus, skills that are directly linked to academic performance (Schwind et al. 2017). Studies indicate that even short-term mindfulness interventions can lead to increased concentration levels among students (De la Fuente et al. 2018). This is particularly beneficial in the context of university education, where students are often required to engage with complex materials and concepts over extended periods.

Mindfulness has also been recognised as an effective stress-reduction tool, which is particularly pertinent in the high-pressure environment of universities (Galante et al. 2018). Academic stress is a significant concern, with many students reporting feelings of overwhelm and anxiety due to their studies (Hj Ramli et al. 2018). Mindfulness practices, such as meditation and focused breathing, have been shown to reduce symptoms of stress and anxiety (Egan et al. 2022). By learning to approach their experiences with a sense of calm and presence, students can better manage the pressures of academic deadlines, examinations, and the expectations placed upon them (Weare 2019).

Understanding the current landscape of academic stress among university students is crucial to appreciating the potential benefits of mindfulness (Hj Ramli et al. 2018). Today's students face a myriad of stressors, from the academic workload to financial concerns, social pressures, and the challenge of navigating independence (Egan et al. 2022). The transition to university life can be particularly daunting, with many students living away from home for the first time and learning to balance their studies with other responsibilities (Galante et al. 2018). This complex web of challenges underscores the need for effective strategies to support student well-being and academic resilience (Schwind et al. 2017).

While mindfulness offers promising benefits, it is also essential to address potential critiques and limitations of its application in education (Ergas and Hadar 2019). Some sceptics question the efficacy of mindfulness, pointing to the need for more rigorous research to establish its benefits conclusively (De la Fuente et al. 2018). Others raise concerns about the practicalities of implementing mindfulness programs, such as the need for trained instructors, the investment of time, and ensuring that practices are accessible and relevant to all students (Weare 2019). Additionally, cultural considerations must be taken into account, as mind-

fulness, rooted in Eastern traditions, may not resonate with every individual's belief system or personal preferences (Ergas and Hadar 2019).

The purpose of this study is to investigate the effects of mindfulness practices on focus and academic stress among university students in Hafr Al-Batin. This research aims to explore how mindfulness, as a mental and emotional regulation strategy, can influence students' ability to concentrate, manage academic pressures, and enhance overall well-being within the unique cultural and educational context of Hafr Al-Batin.

Objectives of the Study

The study aimed to assess the effectiveness of mindfulness practices in reducing academic stress and improving focus among university students. It sought to compare outcomes between a group receiving mindfulness training and a control group, and to gather qualitative feedback on the participants' experiences and perceptions of the program. Additionally, the study aimed to explore the feasibility of integrating mindfulness practices into the university curriculum at Hafr Al-Batin University.

METHODOLOGY

Research Design

The research design for this study is a quasi-experimental design, specifically chosen to assess the impact of mindfulness practices on focus and academic stress among university students in Hafr Al-Batin. This design involves the comparison of two groups, one that participates in mindfulness training (the intervention group) and another that does not receive this training (the control group).

The justification for choosing a quasi-experimental design lies in its ability to provide more robust evidence of causality compared to observational studies like cross-sectional designs. While it does not reach the level of control or randomisation found in true experiments, a quasi-experimental design is well-suited for educational settings where random assignment may not be feasible or ethical. This approach allows for the observation of changes over time in both the intervention and control groups, offering insights into the effectiveness of mindfulness practices in reducing stress and enhancing focus.

Research Population

The population for this study comprises university students enrolled at institutions in Hafr Al-Batin. This demographic is selected due to their exposure to unique academic and social stressors inherent in university life, making them an ideal group for examining the impact of mindfulness on stress and focus. The choice of this population also reflects the study's aim to provide insights relevant to the specific cultural, educational, and social context of Hafr Al-Batin. Students from various faculties and levels of study will be included to ensure a diverse and representative sample. This diversity is crucial for understanding the broad applicability and potential benefits of mindfulness practices across different academic disciplines and stages of university education. The study will strive to include a balanced mix of participants in terms of gender, age, and academic background to enhance the generalisability of the findings.

Research Sample

The sample for this study comprised 60 students enrolled in the 'Thinking Skills and Education' course within the Department of Social Work, Faculty of Arts, at Hafr Al-Batin University during the first semester of the 2022-2023 academic year. This particular group of students was selected to provide a focused examination of the effects of mindfulness within a specific educational context. By focusing on students from a single course, the study aims to maintain a degree of homogeneity in the sample, which helps control for extraneous variables related to the academic environment and curriculum. This approach, while somewhat limiting the generalisability of the findings to other contexts, is essential for a controlled assessment of the impact of mindfulness interventions.

To facilitate the quasi-experimental design of the study, these 60 students were randomly distributed into two equal groups, that is, a control group and an experimental group, each consisting of 30 students. The random allocation is crucial in reducing selection bias and ensuring that any observed differences between the groups can be more confidently attributed to the mindfulness intervention. The experimental group participated in a mindfulness training program, designed to enhance focus and reduce academic stress, while the control

group did not receive this training. The use of a control group provides a critical baseline for comparing the effects of the mindfulness intervention on the experimental group, enabling a more valid evaluation of its impact on students' focus and stress levels in a university setting.

Research Instrument

The primary research instrument in this study was a structured questionnaire designed to measure the effects of mindfulness on focus and academic stress among university students. The questionnaire aimed to capture various dimensions of students' experiences, including stress levels, focus, and overall well-being.

The questionnaire consisted of two sections. The first gathered demographic data such as age, gender, academic year, and major. The second section included validated scales specifically chosen for their relevance and established reliability in measuring the desired outcomes. The Perceived Stress Scale (PSS) was used to assess stress levels, known for its widespread application and validated reliability in psychological research. The Mindful Attention Awareness Scale (MAAS) was employed to evaluate focus and attention, recognised for its strong psychometric properties in assessing dispositional mindfulness.

To enrich the quantitative data, additional questions were included to explore students' attitudes towards mindfulness and their personal experiences with the practices implemented in the study. These questions aimed to provide qualitative insights into the perceived effectiveness of mindfulness in managing academic stress and enhancing focus.

To ensure the reliability and validity of the questionnaire, it underwent rigorous pilot testing. During this phase, feedback was obtained to refine the instrument, ensuring clarity, relevance, and the elimination of potential biases. The scales used, PSS and MAAS, have been validated in previous studies, with Cronbach's alpha values typically exceeding 0.70, indicating good internal consistency. Furthermore, the construct validity of these scales was supported by their widespread use and acceptance in psychological research.

The questionnaire was administered to both the control and experimental groups before and after the mindfulness intervention. This pre- and post-test methodology allowed for tracking changes over time, providing critical data for evaluating

the intervention's impact. In administering the questionnaire, measures were taken to ensure confidentiality and participant comfort, thereby promoting honest and accurate responses.

Description of the Mindfulness Program

The mindfulness program implemented in this study was structured as a comprehensive, systematic intervention, designed to introduce and deepen mindfulness practices among the participants. The program comprised eight sessions, each lasting approximately one hour. These sessions were held once a week over the course of eight weeks, a duration chosen to allow participants sufficient time to learn, practice, and integrate mindfulness techniques into their daily lives.

Session Breakdown and Content

1. **Introduction to Mindfulness:** The first session was an introduction to the concept of mindfulness, its origins, and its benefits, particularly in the context of academic stress and focus.
2. **Breathing Techniques:** The second session focused on basic mindfulness breathing techniques, teaching students how to use breath as a tool to anchor their attention in the present moment.
3. **Body Scan Meditation:** In the third session, participants were guided through a body scan meditation to develop body awareness and recognise physical signs of stress.
4. **Mindful Awareness Practices:** This session introduced various mindful awareness practices, encouraging students to be fully present in their daily activities.
5. **Dealing with Stress:** The fifth session was dedicated to applying mindfulness in stressful situations, particularly those related to academic challenges.
6. **Mindful Communication:** This session focused on developing mindful listening and speaking skills, enhancing interpersonal interactions.
7. **Integrating Mindfulness into Daily Life:** The seventh session dealt with strategies for integrating mindfulness into daily routines and academic tasks.

8. **Review and Future Practice:** The final session was a review of all techniques covered and a discussion on how to maintain mindfulness practice moving forward.

Time Allocation and Setting

Each session was meticulously planned to ensure a balance between theoretical instruction and practical exercises. The sessions were held in a quiet, comfortable space conducive to relaxation and concentration.

Validity and Reliability of the Program

The program's content was developed based on established mindfulness curricula and practices that have been validated in previous academic studies. The techniques chosen for the program are widely recognised and have been shown to be effective in reducing stress and improving focus in various populations, including university students.

The program's reliability and effectiveness were further ensured by having it facilitated by a certified mindfulness instructor with experience in mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT). The instructor's expertise was critical in adapting the practices to suit the specific needs and context of the student population in Hafr Al-Batin.

To assess the program's effectiveness, feedback was collected from participants at the end of each session and at the conclusion of the program. This feedback, along with the pre- and post-intervention questionnaire data, provided valuable insights into the program's impact and areas for future improvement. The combination of evidence-based practices, expert facilitation, and continuous participant feedback ensured the program's validity and reliability as an intervention tool in this study.

Data Analysis

In the analysis and processing of data for this study, the Statistical Package for the Social Sciences (SPSS) software was utilised for its robust data analysis capabilities. Preliminary data processing involved checking for completeness and accuracy, with any missing values or outliers being addressed. Descriptive statistics were first applied to

provide an overview of the data, summarising it using measures like means, standard deviations, and frequency distributions. To compare pre- and post-intervention scores within the same group, a Paired Samples t-test was employed, determining significant changes in stress levels and focus over the intervention period. Additionally, an Independent Samples t-test was conducted to assess the differences between the experimental and control groups, evaluating whether the changes in the experimental group were significantly different from those in the control group. The application of these statistical tests through SPSS facilitated a comprehensive and nuanced analysis of the study’s data, enabling the effective evaluation of the mindfulness intervention’s impact.

RESULTS

In this study, the researchers meticulously analysed the socio-demographic characteristics of the participants to establish comparability between the experimental and control groups, each consisting of 30 students from Hafr Al-Batin University (Table 1).

Gender distribution was nearly balanced in both groups, with the experimental group having an equal number of males and females (15 each, 50%), while the control group comprised 16 males (53.3%) and 14 females (46.7%). Statistical analysis using a chi-square test confirmed that the difference in gender distribution was not significant ($p=0.82$), indicating that gender was unlikely to be a confounding variable in the study’s outcomes (Table 1).

Age distribution showed a slight variation. In the experimental group, 46.7 percent were in the 18-20 year age range, compared to 50 percent in the control group. Conversely, 53.3 percent in the experimental group and 50 percent in the control

group were in the 21-23 year range. These differences were not statistically significant ($p = 0.76$), suggesting that age distribution was well-balanced between the groups (Table 1).

Regarding the academic year of the participants, both groups showed a similar distribution, that is, 33.3 percent of the experimental group and 36.7 percent of the control group were 2nd-year students, 40 percent of the experimental group and 33.3 percent of the control group were 3rd-year students, and 26.7 percent of the experimental group compared to 30 percent of the control group were in their 4th year. These results, analysed using ANOVA, showed no significant differences in the academic year distribution (2nd year: $p = 0.71$, 3rd year: $p = 0.69$, 4th year: $p = 0.65$) (Table 1).

Qualitatively, feedback from participants further supported the quantitative findings. Many students, especially from the experimental group, shared positive experiences about how mindfulness practices influenced their academic life, providing insights that complemented the quantitative data. These qualitative accounts added depth to the understanding of the impact of mindfulness on focus and stress reduction among university students.

The study’s examination of the impact of mindfulness intervention on stress and focus levels among university students yielded significant findings. As detailed in Table 2, both stress and focus levels showed remarkable changes in the experimental group when compared to the control group.

In terms of stress levels, there was a notable decrease in the experimental group, with the mean score dropping from 4.5 (SD = 1.2) at pre-intervention to 3.1 (SD = 1.3) at post-intervention. This reduction signifies a substantial decrease in perceived stress among participants who underwent the mindfulness intervention. On the other hand,

Table 1: Socio-demographic characteristics of participants with p-values

Characteristic	Category	Experimental group (n=30)	Control group (n=30)	p-value
Gender	Male	15 (50%)	16 (53.3%)	0.82
	Female	15 (50%)	14 (46.7%)	0.82
Age (years)	18-20	14 (46.7%)	15 (50%)	0.76
	21-23	16 (53.3%)	15 (50%)	0.76
Academic Year	2 nd Year	10 (33.3%)	11 (36.7%)	0.71
	3 rd Year	12 (40%)	10 (33.3%)	0.69
	4 th Year	8 (26.7%)	9 (30%)	0.65

Source: Author

Table 2: Pre- and post-intervention scores for experimental and control groups

Variable	Time	Experimental group mean (SD)	Control group mean (SD)	p-value
Stress Level	Pre-intervention	4.5 (1.2)	4.5 (1.1)	<0.01
	Post-intervention	3.1 (1.3)	4.5 (1.2)	<0.01
Focus Level	Pre-intervention	3.2 (1.1)	3.3 (1.0)	<0.05
	Post-intervention	4.6 (1.2)	3.4 (1.1)	<0.05

Source: Author

the control group maintained a consistent stress level, with a mean score of 4.5 (SD = 1.2) both before and after the intervention period. The difference in stress level changes between the experimental and control groups was statistically significant ($p < 0.01$), underscoring the effectiveness of the mindfulness intervention in stress reduction.

Similarly, focus levels in the experimental group improved significantly. The mean focus score increased from 3.2 (SD = 1.1) at pre-intervention to 4.6 (SD = 1.2) at post-intervention, indicating a marked improvement in concentration and attention. In contrast, the control group exhibited only a marginal change in focus level, with the mean score slightly rising from 3.3 (SD = 1.0) to 3.4 (SD = 1.1). The statistical analysis revealed that the enhancement in focus levels for the experimental group was significant compared to the control group ($p < 0.05$).

These results clearly demonstrate the positive impact of the mindfulness intervention on reducing stress and enhancing focus among university students. The significant changes observed in the experimental group, as opposed to the minimal changes in the control group, highlight the potential benefits of incorporating mindfulness practices into student wellness programs.

Table 3 in the study presents a comprehensive comparison of the changes in stress and focus levels between the experimental and control groups, underscoring the efficacy of the mindfulness intervention.

Regarding stress levels, the experimental group demonstrated a pronounced reduction. The mean change in stress level was -1.4 (SD = 0.5), indicating a significant alleviation of stress among these participants. This finding contrasts sharply with the control group, where the change in stress level was negligible, evidenced by a mean change of only -0.1 (SD = 0.3). The stark difference in the magnitude of change between the groups is statistically significant, with a p-value of less than 0.001 in both within-group and between-group comparisons. This strongly suggests that the mindfulness intervention played a key role in reducing stress levels among the participants.

In terms of focus levels, the differences between the groups were equally striking. The experimental group experienced a substantial increase in focus, as shown by a mean change of 1.4 (SD = 0.6). This improvement highlights the positive impact of the mindfulness practices on enhancing concentration and attention. Conversely, the control group exhibited only a slight improvement in focus, with a mean change of 0.1 (SD = 0.2). The statistical analysis confirms these observations, indicating significant changes within each group and between the groups ($p < 0.001$ in both cases).

These results, as detailed in Table 3, not only reinforce the effectiveness of the mindfulness intervention but also highlight its potential as a powerful tool for managing stress and improving focus among university students. The significant changes observed in the experimental group compared to the minimal changes in the control group pro-

Table 3: Comparison of changes in scores for experimental and control groups

Variable	Experimental group change (Mean \pm SD)	Control group change (Mean \pm SD)	p-value within groups	p-value between groups
Change in stress level	-1.4 \pm 0.5	-0.1 \pm 0.3	<0.001	<0.001
Change in focus level	1.4 \pm 0.6	0.1 \pm 0.2	<0.001	<0.001

Source: Author

vide compelling evidence of the benefits of mindfulness practices in academic settings.

Table 4 in the study delineates the qualitative feedback received from participants regarding their experiences with the mindfulness program, offering valuable insights into their subjective perceptions and the program’s perceived effectiveness.

A majority of the participants expressed a high level of satisfaction with the mindfulness program, with 85 percent reporting positive experiences. This overwhelming approval reflects the participants’ general favorability towards the mindfulness practices introduced. Many participants described the program as both helpful and enjoyable, suggesting that the mindfulness exercises were well-received and appreciated for their benefits.

In terms of the program’s impact on stress levels, 75 percent of the participants reported experiencing a noticeable reduction in their stress. This subjective feedback aligns closely with the quantitative data obtained in the study, lending further credibility to the stress-reducing effect of the mindfulness intervention. These personal accounts add a human dimension to the statistical findings, illustrating how the intervention translated into real-world benefits for the participants.

Regarding focus, a significant 80 percent of participants observed improvements in their concentration and attention, particularly in academic tasks. This feedback is particularly relevant, as it underscores the potential of mindfulness practices in enhancing cognitive abilities that are crucial for academic success. The participants’ reports of increased focus and attention validate the quantitative results and demonstrate the practical implications of mindfulness in educational settings.

The feedback also shed light on the practicality of integrating mindfulness into daily routines. While 60 percent of participants found it easy to

incorporate mindfulness practices into their daily lives, 40 percent faced challenges in doing so. This variation underscores the importance of tailored mindfulness approaches that take into account individual differences and lifestyles. It highlights the necessity for flexible and adaptable mindfulness training that can cater to diverse needs and preferences of university students.

In summary, the qualitative feedback from Table 4 not only complements the quantitative results but also provides a deeper understanding of the program’s impact from the participants’ perspective. It reveals the practical benefits of mindfulness practices and the varying ease of integration into everyday life, emphasising the need for personalised mindfulness training approaches.

DISCUSSION

The primary aim of this study was to examine the effects of a mindfulness-based intervention on focus and academic stress among university students. The significant improvements in stress reduction and focus enhancement observed in the experimental group, compared to the control group, echo the findings of recent literature, affirming the effectiveness of mindfulness practices in academic settings.

While the results align with Hj Ramli et al. (2018), who underscored mindfulness as a mediator in managing academic stress and enhancing self-regulation, this study extends this understanding by quantifying the decrease in stress levels. This suggests not just a correlation, but a direct impact of mindfulness practices on stress reduction in students. In comparison, Breedvelt et al. (2019) demonstrated the broader mental health benefits of mindfulness, including its efficacy in alleviating depression and anxiety. The findings contribute to this narrative by specifically illustrating mindful-

Table 4: Qualitative feedback from participants on mindfulness program

<i>Feedback category</i>	<i>Responses</i>	<i>Frequency/Percentage</i>
Overall satisfaction with the program	Most found it helpful and enjoyable	85% positive responses
Perceived impact on stress	Significant reduction in stress reported by many	75% reported reduction
Perceived impact on focus	Improved concentration and attention in academic tasks	80% noticed improvement
Ease of integrating mindfulness into daily life	Varied responses, some found it easy, others needed more time	60% found it easy, 40% found it challenging

Source: Author

ness as a potent tool in reducing stress, a prevalent issue in university settings.

The noted improvement in focus in the study resonates with Galante et al. (2018), who reported increased resilience to stress through mindfulness, potentially aiding in enhanced academic performance. This raises the possibility that mindfulness's stress-alleviating properties might indirectly bolster cognitive functions like concentration. However, it is essential to consider whether the improvement in focus is a direct result of mindfulness training or an indirect effect of reduced stress.

The relevance of digital mindfulness interventions explored by Huberty et al. (2019) indicates a promising avenue for adapting mindfulness training to modern student lifestyles. The study's traditional approach, while effective, could be complemented in future research by incorporating digital platforms, expanding accessibility and appeal to a tech-savvy generation.

Bai et al. (2020) provided a model for real-time assessment of mindfulness effects, which the study could utilise in the future to gain more nuanced insights. While the findings corroborate the reduced stress levels reported by Bai et al. (2020), an ecological momentary assessment could offer a more granular understanding of mindfulness impacts over time.

Extending beyond academic performance, McConville et al. (2017) and O'Driscoll et al. (2017) emphasised the utility of mindfulness across various academic disciplines. This multidisciplinary potential suggests that the benefits observed in the study could be applicable in diverse educational contexts, not limited to the realm of social work.

Additionally, Petterson and Olson (2017) explored mindfulness in physical health contexts, such as stress and injury reduction in athletes. This broadens the scope of mindfulness benefits beyond mental well-being, suggesting potential physical health applications for students engaged in rigorous physical activities or sports.

Centeno and Fernandez (2020) touched upon the impact of mindfulness on empathy and self-compassion, hinting at social and emotional competencies that the study did not measure. These dimensions present an opportunity for future research to explore the holistic impact of mindfulness on student well-being.

Lastly, the work of Dvořáková et al. (2017) and Vidic and Cherup (2019) on the role of mindfulness in easing the transition to college life parallels the findings on stress reduction. This suggests that mindfulness interventions could be particularly beneficial for incoming university students, aiding in their adaptation to a new academic and social environment.

In conclusion, while the study contributes to the growing body of evidence supporting the benefits of mindfulness in academic settings, it also opens pathways for future research. A more comprehensive exploration of mindfulness applications, including digital platforms and real-time assessments, as well as its impact across various student demographics and disciplines, could further elucidate its role in enhancing student life.

CONCLUSION

In conclusion, this study contributes to the growing body of evidence supporting the use of mindfulness interventions in academic settings. The significant improvements in stress and focus among participants align with existing research, highlighting the potential of mindfulness practices in enhancing student well-being and academic performance. Future research might explore the long-term impacts of these interventions, their applicability across different study disciplines, and the integration of digital mindfulness platforms in educational settings.

RECOMMENDATIONS

Based on the findings of this study, it is recommended that educational institutions consider integrating mindfulness programs into their curricula to promote the mental well-being and academic success of students. These programs should be designed to cater to the unique needs and cultural contexts of the student population. Furthermore, future research should explore the long-term effects of mindfulness interventions and the potential for digital platforms to deliver such programs, ensuring accessibility to a wider range of students. Additionally, efforts should be made to address the limitations of this study by conducting large-scale research with random assignment and long-

er follow-up periods to further validate the benefits of mindfulness in the educational context.

LIMITATIONS

The study, while providing valuable insights, had certain limitations. The sample size was relatively small and confined to students from a single course at Hafr Al-Batin University, which may limit the generalisability of the findings to a broader student population. Additionally, the study's quasi-experimental design, lacking random assignment, could introduce selection bias, potentially impacting the results. The reliance on self-reported measures for stress and focus also raises concerns about subjective bias. Furthermore, the short duration of the mindfulness intervention and the lack of long-term follow-up limit the understanding of the sustained effects of mindfulness practices. These limitations suggest that the findings should be interpreted with caution and highlight the need for further research involving larger, more diverse samples and longer-term assessments.

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