



## The role of school-based mental health interventions in enhancing students' well-being and academic success at the university of port harcourt

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### Abstract

The prevalence of mental health issues among university students has increased significantly in recent years, affecting both academic achievement and overall well-being. This study examined the effectiveness of school-based mental health interventions—including counselling services and mindfulness programs—in enhancing students' academic performance and well-being at the University of Port Harcourt, Nigeria. A mixed-methods approach was employed, integrating quantitative data from academic records and well-being surveys with qualitative feedback from students and lecturers. A sample of 400 students and 20 lecturers participated in a 10-week intervention program. Quantitative results revealed significant improvements in well-being as measured by the Warwick-Edinburgh Mental Well-Being Scale (WEMWBS),  $t(399) = 6.78$ ,  $p < .001$ , Cohen's  $d = 0.58$ , and significant reductions in anxiety as measured by the Generalized Anxiety Disorder scale (GAD-7),  $t(399) = 5.92$ ,  $p < .001$ , Cohen's  $d = 0.57$ . Academic performance (GPA) improved significantly,  $t(399) = 4.12$ ,  $p < .01$ , and absenteeism decreased from 8.5% to 6.2% ( $p < .05$ ). Qualitative findings indicated that 82% of students reported reduced stress and improved focus, while teachers noted increased classroom participation alongside persistent barriers such as stigma and counsellor availability. The study concludes that school-based mental health interventions significantly enhance student well-being and academic success. Recommendations include increased funding for counselling services, teacher training in mental health first aid, and de-stigmatization programs to promote help-seeking behaviour.

**Keywords:** School-based mental health interventions, student well-being, academic success, counselling services, mindfulness, university of port harcourt, fifth industrial revolution

### Introduction

In 2025, mental health has emerged as a critical determinant of student success, according to research in educational psychology. Educational institutions across Nigeria, including the University of Port Harcourt, are increasingly implementing mental health interventions in response to rising rates of anxiety, depression, and stress among students. These conditions are exacerbated by academic demands, social pressures, and global challenges such as social media misuse, globalization, and the pervasive influence of unrealistic lifestyle expectations. Programs such as social-emotional learning (SEL), mindfulness training, and school-based counselling aim to promote emotional regulation, resilience, and overall psychological well-being.

The importance of mental health in today's rapidly changing educational environment cannot be overstated, particularly within higher education institutions. Students frequently encounter a wide range of challenges that affect their emotional and psychological health as they navigate the complexities of university life. These challenges—including academic pressure, transitional stressors, social isolation, and financial concerns—can significantly impair both mental health and academic performance (Obi *et al.*, 2017; Ogunwemo, 2018) [12, 13].

Implementing school-based mental health interventions provides a proactive approach to addressing these challenges at their source. By integrating mental health care into the educational framework, universities can establish a supportive environment that prioritizes student well-being while simultaneously enhancing academic outcomes. The Fifth Industrial Revolution (5IR), which emphasizes human-

centered approaches leveraging innovation and technology, underscores the urgency of developing robust mental health support networks within educational institutions (Schwab, 2021) [14]. In this context, mental health interventions can serve as a cornerstone of academic success when implemented comprehensively and grounded in empirical research and community engagement.

### Research Question

This study sought to answer the following research question: How do school-based mental health interventions affect the academic performance and well-being of students at the University of Port Harcourt?

### Hypotheses

The following null hypotheses were tested:

- **H<sub>01</sub>:** There is no significant difference in student well-being scores before and after the implementation of school-based mental health interventions.
- **H<sub>02</sub>:** There is no significant difference in student anxiety levels before and after the implementation of school-based mental health interventions.
- **H<sub>03</sub>:** There is no significant difference in student academic performance (GPA) before and after the implementation of school-based mental health interventions.

### Objectives

The specific objectives of this study were to

1. Increase the average well-being score (WEMWBS) of participants by at least 10% within six months following the intervention.

2. Reduce the average anxiety score (GAD-7) by at least 25% over the same period, indicating improved coping mechanisms and reduced anxiety symptoms.
3. Increase the average academic performance (GPA) by a minimum of 0.2 points following the intervention.
4. Reduce the average absenteeism rate by at least 20%.
5. Achieve at least 80% active participation in mindfulness and mental health seminars.
6. Establish peer support networks promoting ongoing mental health conversations.
7. Equip at least 70% of participants with lasting coping strategies for managing stress and anxiety.
8. Conduct follow-up assessments three- and six-months post-intervention to evaluate long-term impact.
9. Ensure at least 90% of participants can identify mental health issues in themselves and others following awareness seminars.
10. Achieve an overall participant satisfaction rating of 85% or higher.

## Literature Review

### 1. Prevalence of Mental Health Issues Among University Students

The prevalence of mental health issues among university students has gained increasing recognition in recent research. A substantial body of evidence indicates that stress-related disorders, anxiety, and depression are becoming increasingly common in this population. According to the American College Health Association (2020) <sup>[2]</sup>, approximately 40% of college students report experiencing overwhelming anxiety, while about 30% report significant depressive symptoms that impair daily functioning. These findings have been corroborated by studies conducted specifically within Nigerian universities, including the University of Port Harcourt, which have documented significant rates of mental health challenges linked to academic pressure, financial concerns, and societal expectations (Obi *et al.*, 2017) <sup>[12]</sup>.

A recent CDC (2023) survey further highlighted the severity of mental health issues among young people, reporting that 42% of high school students in the United States felt persistently sad or hopeless, and 22% had seriously considered suicide. While these figures reflect the U.S. context, they underscore the global nature of the youth mental health crisis and the urgent need for effective interventions.

### 2. The Relationship Between Mental Health and Academic Success

The connection between mental health and academic achievement is well established in the literature. Students experiencing mental health difficulties often demonstrate lower academic performance, higher dropout rates, and poorer retention compared to their peers (Eisenberg *et al.*, 2009) <sup>[6]</sup>. In the Nigerian context, Ogunwemo (2018) <sup>[13]</sup> found that high levels of stress and anxiety significantly impair students' concentration, motivation, and overall educational outcomes, creating a critical link between psychological well-being and academic success. The cognitive interference associated with anxiety disrupts working memory and executive functioning, making it difficult for students to engage effectively with academic tasks.

### 3. School-Based Mental Health Interventions

School-based mental health interventions represent a promising strategy for addressing these challenges. Such interventions typically include counselling services, peer support groups, mental health education, and staff training to identify and respond to mental health concerns. Research indicates that these programs can significantly reduce symptoms of anxiety and depression, improve coping skills, and enhance overall academic performance (Wang *et al.*, 2018) <sup>[17]</sup>.

#### 3.1 Mindfulness-Based Interventions

Mindfulness-based stress reduction (MBSR) has demonstrated particular promise in school settings. A 2024 <sup>[7]</sup> meta-analysis by Felver *et al.* found that mindfulness programs reduced anxiety by 0.35 standard deviations and improved academic performance by 0.25 standard deviations. These effects are attributed to enhanced emotion regulation, improved attention, and reduced rumination. Khoury (2015) <sup>[10]</sup> similarly found that mindfulness practices help students manage their emotions, reduce anxiety, and develop more effective coping strategies.

#### 3.2 Counselling Services

School-based counselling services have also been associated with positive outcomes. Durlak *et al.* (2023) <sup>[5]</sup> reported that students who received counselling demonstrated higher grades and lower absenteeism compared to those who did not. The availability of accessible, confidential counselling supports students in developing problem-solving skills, processing emotional challenges, and building resilience.

### 4. Theoretical Frameworks

Several theoretical models guide the development and implementation of mental health interventions in educational contexts. The Comprehensive School Mental Health Framework, described by Mendez *et al.* (2017) <sup>[11]</sup>, prioritizes a tiered approach that provides universal, targeted, and intensive care according to students' varying needs. This model emphasizes collaboration between families, schools, and mental health professionals to create a supportive environment.

The broaden-and-build theory (Fredrickson, 2001) <sup>[8]</sup> provides additional theoretical grounding. This theory posits that positive emotions—such as those cultivated through mindfulness and supportive relationships—broaden cognitive flexibility and build enduring psychological resources. These resources, in turn, support academic engagement and resilience.

### 5. Digital Mental Health Interventions

The advancement of technology has created new opportunities for mental health intervention delivery. Students can now access options including teletherapy, mental health applications, and online counselling. Research suggests that digital platforms can increase engagement and reduce the stigma associated with seeking help (Burns *et al.*, 2016) <sup>[3]</sup>. In the context of the Fifth Industrial Revolution, leveraging these technologies is essential for promoting student well-being in an evolving educational landscape.

### 6. Cultural Considerations

The effectiveness of school-based mental health interventions is significantly influenced by cultural factors. In Nigeria, traditional beliefs and stigma surrounding mental

health can impede students' willingness to seek help (Adewuya *et al.*, 2007) <sup>[16]</sup>. Successful implementation requires understanding and adapting to cultural values and community attitudes. Culturally sensitive approaches that incorporate local perspectives on well-being and healing may enhance intervention effectiveness.

### 7. Barriers to Implementation

Despite the demonstrated benefits of school-based mental health interventions, implementation faces significant barriers. Green and Thompson (2024) <sup>[9]</sup> identified stigma, inadequate funding, and a shortage of trained personnel as primary obstacles. These barriers are particularly pronounced in resource-constrained settings, where the demand for mental health services often exceeds available capacity.

### 8. Summary of Literature Review

The literature underscores the critical importance of robust mental health support systems in higher education institutions, particularly given the increasing prevalence of mental health challenges among students. School-based interventions have demonstrated potential in improving both well-being and academic outcomes, especially when they are culturally sensitive and integrated with digital technologies. Institutions such as the University of Port Harcourt must draw on this body of research to inform mental health policies and develop comprehensive, accessible support programs that resonate with their diverse student populations.

## Methodology

### 1. Research Design

A mixed-methods research design was employed, integrating quantitative and qualitative approaches to provide a comprehensive understanding of the intervention's effects. This design allowed for the triangulation of findings from multiple data sources, enhancing the validity and depth of conclusions.

### 2. Study Setting and Participants

The study was conducted at the University of Port Harcourt, Nigeria, during the 2023 <sup>[5]</sup>–2024 academic year. Participants comprised 400 students and 20 lecturers. The student sample included individuals from Levels 100 through 300, as well as Basic Studies students. Demographic characteristics are presented in **Table 1**.

**Table 1:** Demographic Characteristics of Participants

Characteristic	Category	Frequency	Percentage
Gender	Male	208	50
	Female	192	48.0
Level of Study	Basic Studies	40	10.0
	Level 100	140	35.0
	Level 200	120	30.0
	Level 300	100	25.0
Total		400	100.0

### 3. Instruments

Three primary instruments were used for quantitative data collection

- Warwick-Edinburgh Mental Well-Being Scale (WEMWBS):** A 14-item scale measuring positive mental health, with scores ranging from 14 to 70.

Higher scores indicate greater well-being. The scale has demonstrated strong psychometric properties in diverse populations (Tennant *et al.*, 2007) <sup>[16]</sup>.

- Generalized Anxiety Disorder 7-Item Scale (GAD-7):** A 7-item scale assessing anxiety symptoms over the past two weeks, with scores ranging from 0 to 21. Higher scores indicate greater anxiety severity. The scale has established reliability and validity (Spitzer *et al.*, 2006) <sup>[15]</sup>.

- Academic Records:** Grade point averages (GPA) and absenteeism rates were obtained from institutional records with appropriate permissions. Qualitative data were collected through

- Open-ended survey questions exploring students' perceived benefits of the intervention (e.g., "How has mindfulness helped you manage stress?")
- Semi-structured interviews with lecturers examining program implementation and observed student outcomes.

### 4. Intervention

Students participated in a 10-week mental health intervention consisting of two components

- Mindfulness Program:** Weekly 20-minute sessions led by trained facilitators, incorporating breathing techniques, guided meditation, and mindful awareness practices. Sessions were integrated into the regular school day to ensure consistent participation.

- Counselling Services:** Individual and group counselling sessions were available with qualified school counsellors on a bi-weekly basis. Counselling focused on stress management, coping strategies, and emotional regulation.

Lecturers received training on supporting student mental health and recognizing signs of distress.

### 5. Data Collection Procedures

Quantitative data were collected at two time points: pre-intervention (baseline) and post-intervention (immediately following the 10-week program). WEMWBS and GAD-7 were administered in classroom settings. GPA and absenteeism data were obtained from official institutional records.

Qualitative data were collected through online surveys distributed to student participants and through semi-structured interviews conducted with lecturers after the intervention period.

### 6. Data Analysis

**Quantitative Analysis:** Paired-samples \*t\*-tests were used to compare pre- and post-intervention scores on WEMWBS, GAD-7, and GPA. Effect sizes were calculated using Cohen's \*d\* to indicate the magnitude of differences. Pearson correlation coefficients were computed to examine relationships among variables. All analyses were conducted using SPSS version 27, with significance set at \*p\* < .05.

**Qualitative Analysis:** Thematic analysis was employed to identify recurring themes in survey responses and interview transcripts. Themes were coded independently by two researchers, with discrepancies resolved through discussion.

## 7. Ethical Considerations

Ethical approval was obtained from the University of Port Harcourt Research Ethics Committee. All participants provided informed consent. Students were assured that participation was voluntary and that their responses would remain confidential. Academic records were accessed only with institutional authorization and were anonymized for analysis

## Results

### 1. Quantitative Findings

Descriptive statistics and paired-samples \*t\*-test results for well-being, anxiety, and academic performance are presented in Tables 2 through 5.

**Table 2:** \*Descriptive Statistics for Well-Being (WEMWBS) and Anxiety (GAD-7)\*

Measure	Pre-Intervention		Post-Intervention	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
WEMWBS	45.2	8.7	50.1	8.2
GAD-7	13	4.5	9.8	4.1

**Table 3:** \*Paired-Samples t-Test Results for Well-Being (WEMWBS) and Anxiety (GAD-7)\*

Measure	*t*(399)	*p*	Cohen's *d*
WEMWBS	6.78	< .001	0.58
GAD-7	5.92	< .001	0.57

**Table 4:** Descriptive Statistics for Academic Performance (GPA)

Measure	Pre-Intervention		Post-Intervention	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
GPA	85	0.60	3.02	0.50

**Table 5:** Paired-Samples t-Test Results for Academic Performance (GPA)

Measure	*t*(399)	*p*	*d*
GPA	4.12	< .01	—

Note. Effect size for GPA not calculated due to scale differences.

Absenteeism rates decreased from 8.5% pre-intervention to 6.2% post-intervention, a statistically significant reduction (\*p\* < .05).

Pearson correlation analyses revealed significant relationships among outcome variables. Higher post-intervention well-being scores were associated with higher GPAs (\*r\* = .38, \*p\* < .01) and with lower anxiety scores (\*r\* = -.45, \*p\* < .01).

### 2. Qualitative Findings

**Student Feedback:** Analysis of open-ended survey responses revealed several recurring themes. The most prominent theme was stress reduction, with 82% of students reporting feeling less stressed after the intervention. Representative comments included

- "I feel calmer during tests now. Before, I would panic and forget everything I studied."
- "The breathing exercises help me when I feel overwhelmed. I use them before exams."
- A second theme, improved interpersonal relationships, emerged from responses such as:
- "I'm better at handling conflicts with my roommates. I don't get angry as quickly."
- "The group sessions helped me realize I'm not alone in what I'm feeling."

- A third theme, enhanced focus and engagement, was reflected in comments like:
- "I can concentrate better in lectures. My mind doesn't wander as much."
- "I actually want to come to class now. Before, I was skipping because I felt too anxious."

**Lecturer Feedback:** Semi-structured interviews with lecturers revealed both positive outcomes and persistent challenges. All 20 lecturers reported observing increased classroom participation among students who attended the intervention sessions. One lecturer noted

- "Students are more willing to answer questions and engage in discussions. There's a noticeable difference in their energy levels."

However, lecturers also identified significant barriers to implementation. Stigma remained a concern, with one lecturer commenting

- "Some students still feel embarrassed to attend counselling. They worry about what others will think."

Resource constraints were also highlighted

- "We have only two counsellors for thousands of students. The waitlist for appointments is long, and some students give up before they get help."

### 3. Integration of Quantitative and Qualitative Findings

The integration of quantitative and qualitative findings reveals a coherent picture of intervention effectiveness. The statistically significant improvements in well-being and anxiety are corroborated by students' qualitative reports of feeling calmer and more focused. The moderate effect sizes (Cohen's \*d\* = 0.58 and 0.57) indicate meaningful practical significance, particularly for students experiencing high baseline distress.

The correlation between well-being and academic performance aligns with qualitative reports of enhanced concentration and engagement. However, qualitative data also reveal persistent barriers—particularly stigma and resource limitations—that quantitative measures alone could not capture. These findings underscore the value of mixed-methods approaches in evaluating complex interventions.

## Discussion

The findings of this study support the hypothesis that school-based mental health interventions significantly improve student well-being and academic performance. The results are consistent with previous research demonstrating the effectiveness of mindfulness programs (Felder *et al.*, 2024) [7] and counselling services (Durlak *et al.*, 2023) [5] in educational settings.

### 1. Improvements in Well-Being and Anxiety

The moderate effect sizes for well-being improvement (Cohen's \*d\* = 0.58) and anxiety reduction (Cohen's \*d\* = 0.57) indicate that the intervention had meaningful practical effects. These findings align with the broaden-and-build theory (Fredrickson, 2001) [8], which posits that positive emotions generated through mindfulness and supportive relationships broaden cognitive flexibility and build enduring psychological resources. Students who experienced reduced anxiety likely had more cognitive capacity available for academic engagement, contributing to the observed improvements in GPA.

## 2. Academic Performance and Engagement

The significant improvement in GPA and reduction in absenteeism suggest that addressing mental health concerns can directly impact academic outcomes. This finding is consistent with Eisenberg *et al.* (2009) <sup>[6]</sup>, who found that students with untreated mental health concerns were more likely to drop out or underperform academically. The correlation between well-being and GPA ( $*r^* = .38$ ) further supports the interconnectedness of psychological and academic functioning.

## 3. Barriers to Implementation

The qualitative findings regarding stigma and resource constraints echo concerns raised by Green and Thompson (2024) <sup>[9]</sup>. Despite the intervention's effectiveness, students' reluctance to seek help due to fear of judgment remains a significant barrier. This is particularly relevant in the Nigerian context, where mental health stigma is prevalent (Adewuya *et al.*, 2007) <sup>[16]</sup>. Additionally, the limited number of counsellors relative to student population highlights systemic resource challenges that must be addressed for sustainable implementation.

## 4. Implications for the Fifth Industrial Revolution

In the context of the Fifth Industrial Revolution (5IR), which emphasizes human-centered approaches leveraging technology and innovation, these findings have important implications. The successful integration of mindfulness and counselling programs demonstrates the value of human-centered interventions that prioritize well-being alongside academic achievement. Future interventions could leverage digital platforms to expand reach, reduce stigma through anonymous access, and provide scalable support to large student populations (Burns *et al.*, 2016) <sup>[3]</sup>.

## 5. Limitations

Several limitations should be acknowledged

- 1. Short Intervention Period:** The 10-week intervention period may not capture long-term effects. Sustainability of improvements requires ongoing support and follow-up.
- 2. Self-Report Measures:** Reliance on self-reported measures (WEMWBS, GAD-7) may introduce response bias, including social desirability effects.
- 3. Single Institution Sample:** The sample was drawn from a single institution, which may limit generalizability to other university contexts, particularly private institutions or those in rural settings.
- 4. Attrition:** Although not reported in detail, some participants may have discontinued the intervention, potentially biasing results toward more engaged students.

## 6. Recommendations for Future Research

Future research should address these limitations through:

- 1. Longitudinal Designs:** Extended follow-up periods (e.g., one year) to assess sustainability of intervention effects.
- 2. Multi-Site Studies:** Inclusion of multiple institutions across different regions to enhance generalizability.

- 3. Objective Measures:** Incorporation of objective measures (e.g., physiological stress indicators, academic records) alongside self-report.

- 4. Implementation Science:** Investigation of factors that facilitate or hinder implementation across diverse contexts.

- 5. Comparative Effectiveness:** Direct comparison of different intervention modalities (e.g., in-person vs. digital) to identify optimal approaches.

## Recommendations for Practice

Based on the findings of this study, the following recommendations are made for the University of Port Harcourt and similar institutions

### For Institutional Policy

- Increase funding and staffing for counselling services to reduce wait times and improve accessibility.
- Develop and implement school-wide de-stigmatization programs, including mental health awareness weeks, peer-led workshops, and visible counselling services.
- Integrate mental health literacy into the curriculum, ensuring all students understand how to recognize and respond to mental health concerns.

### For Faculty and Staff

- Provide mandatory mental health first aid training for all lecturers and administrative staff to equip them with skills to identify and support struggling students.
- Establish clear referral pathways so faculty members know how to connect students with appropriate services.
- Foster supportive classroom environments by incorporating stress-reduction strategies and flexible accommodations for students experiencing mental health challenges.

### For Students

- Establish and promote peer support networks to reduce isolation and provide informal support.
- Encourage participation in extracurricular activities that foster community and social connection.
- Utilize available mental health resources, including counselling services and mindfulness programs, without fear of judgment.

### For the University as a Whole

- Create a culture that prioritizes well-being alongside academic achievement, recognizing that these goals are mutually reinforcing.
- Conduct regular evaluations of mental health programs to ensure continued effectiveness and responsiveness to student needs.
- Leverage technology to expand reach, including online counselling options, mental health apps, and virtual support groups.

## Conclusion

This study provides empirical evidence that school-based mental health interventions—specifically mindfulness programs and counselling services—significantly improve student well-being, reduce anxiety, and enhance academic

performance at the University of Port Harcourt. The moderate effect sizes and qualitative reports of stress reduction, improved focus, and enhanced engagement underscore the practical significance of these findings.

However, the persistence of stigma and resource constraints highlights the need for systemic changes to ensure equitable access to mental health support. In the context of the Fifth Industrial Revolution, universities must embrace human-centered approaches that prioritize student well-being as a foundation for academic success.

By addressing mental health proactively and comprehensively, institutions can create environments where students not only survive but thrive—developing the resilience, coping skills, and emotional intelligence necessary for success in university and beyond

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