

Innovations

Demographic Characteristics and their Implications on Mental Health among Nigerian Undergraduates

Eyisi I. Meek¹; Abiodun M. Gesinde²; Gboyega E. Abikoye³; Joy C. Eyisi⁴

^{1, 2}Department of Psychology, Covenant University

³Department of Psychology, University of Uyo

⁴Department of Languages and General Studies, Covenant University

Correspondent Author: [Eyisi I. Meek](#)

Abstract: *Understanding the influence of demographic factors on mental health outcomes is crucial for designing effective interventions in university populations. This study explores the socio-demographic characteristics of Nigerian undergraduates and their relationship with mental health challenges, including suicide ideation, perceived stress, and quality of life. Utilizing an ex post facto research design, data were collected from 4,930 students across three geopolitical zones—Southeastern, Southwestern, and Northcentral Nigeria. The findings reveal significant gender, regional, and academic level differences in mental health outcomes. Male students exhibited higher levels of suicide ideation compared to their female counterparts, while final-year (400-level) students reported elevated stress levels due to academic and transitional pressures. Regional disparities were pronounced, with the Northcentral zone showing the highest prevalence of suicide ideation and fear of missing out (FoMO). These results underscore the importance of socio-demographic factors in shaping mental health outcomes and highlight the need for targeted, gender-sensitive, and regionally tailored interventions. Universities should prioritize mental health resources that address the diverse needs of their student populations while leveraging existing cultural and religious structures for support. Future research should employ longitudinal approaches to explore causal relationships and refine intervention strategies.*

Introduction

Globally, mental health challenges have emerged as a critical concern among university students, with this population uniquely vulnerable to stress, anxiety, depression, and suicidal ideation. Academic pressures, social dynamics, and the transition to adulthood contribute significantly to the mental health burdens faced by

undergraduates. Studies indicate that psychological distress affects over 30% of university students worldwide, often exceeding rates seen in the general population (Auerbach et al., 2018; Mortier et al., 2018).

In Nigeria, the situation is particularly alarming. Socio-economic challenges, cultural expectations, and limited access to mental health services exacerbate these issues (Labinjo et al., 2020; Adewuya et al., 2018). Nigerian undergraduates often face the dual burden of academic demands and socio-cultural pressures, which can lead to elevated levels of perceived stress and a higher likelihood of experiencing suicidal ideation (Bello & Ajayi, 2019). Despite these challenges, mental health support remains inadequate in Nigerian universities, highlighting the need for focused research and intervention.

Demographic characteristics such as gender, age, and marital status have been consistently linked to variations in mental health outcomes. Gender differences are particularly pronounced, with evidence suggesting that males are more likely to report suicidal ideation, while females tend to experience higher levels of stress and anxiety (Sharp & Theiler, 2018; Oyetunji et al., 2021). Age also plays a critical role, as younger students, typically aged 18–24, are at higher risk of experiencing mental health challenges due to their developmental stage and limited coping mechanisms (Mortier et al., 2018).

Marital status, although less frequently studied in undergraduate populations, has implications for social support and coping mechanisms. For instance, single students may lack the structured support systems available to married individuals, potentially increasing their susceptibility to stress and other mental health challenges (Eke et al., 2021). Understanding these demographic influences is crucial for tailoring interventions that address the specific needs of diverse student populations.

Despite the recognized importance of demographics in mental health research, limited studies have examined how socio-demographic factors shape mental health outcomes among Nigerian undergraduates. Existing research often generalizes findings from international contexts or fails to consider the cultural and regional nuances unique to Nigeria (Labinjo et al., 2020; Eke et al., 2021). Moreover, disparities in mental health services across Nigeria further hinder comprehensive intervention efforts (Bello & Ajayi, 2019). This gap underscores the need for focused research that delves into the socio-demographic profiles of Nigerian undergraduates and their implications for mental health.

The primary objective of this study is to assess the socio-demographic characteristics of Nigerian undergraduates and examine their impact on mental health outcomes. Specifically, this study aims to explore how factors such as gender,

age, marital status, and level of study influence mental health indicators like suicide ideation, perceived stress, and quality of life.

The key research questions guiding this study include:

1. How do socio-demographic variables such as gender, age, and marital status relate to mental health outcomes among Nigerian undergraduates?
2. What regional differences exist in the prevalence of suicide ideation, perceived stress, and quality of life among undergraduates?
3. How does the academic level influence stress and mental health outcomes in this population?

Methods

This study utilized an *ex post facto* research design, which is well-suited for examining the relationships between pre-existing demographic characteristics—such as gender, age, and marital status—and mental health outcomes, including suicide ideation, perceived stress, and quality of life. This design allows researchers to analyze naturally occurring variations within a population without manipulating variables, making it a commonly employed approach in mental health studies (Mohamadian et al., 2015; Goodman-Scott & McMahon, 2022).

The study population comprised undergraduate students from universities located in three major geopolitical zones of Nigeria: Southeastern, Southwestern, and Northcentral regions. These zones were selected to reflect the diverse cultural, economic, and educational contexts of Nigerian undergraduates. Participants were drawn from both public and private universities, with levels of study ranging from 100 to 400 levels, ensuring a broad and representative sample of the student population.

A stratified sampling technique was employed to achieve proportional representation across the three geopolitical zones. Universities within each zone were randomly selected, and participants were then randomly chosen from the selected institutions. Stratified sampling is often recommended in *ex post facto* studies to ensure generalizability and minimize selection bias (Ugwuanyi & Okeke, 2022).

Data were collected using a variety of validated instruments. A socio-demographic questionnaire was administered to capture key characteristics, including age, gender, religion, marital status, and academic level. Mental health outcomes were assessed using the German Beck Scale for Suicide Ideation (BSS), a 10-item scale designed to measure the prevalence and intensity of suicidal thoughts. Perceived stress was evaluated using the Perceived Stress Scale (PSS), a widely used 10-item

tool that measures the extent to which situations in life are perceived as stressful. The WHO Quality of Life Questionnaire (WHOQoL-BREF), a 26-item instrument, was used to assess quality of life across physical, psychological, social, and environmental domains. Additionally, the Fear of Missing Out Scale (FoMOS) was utilized to gauge participants' anxiety about missing out on rewarding experiences, particularly in social settings. These tools have been extensively validated in previous ex post facto research (Pareek & Joshi, 2018; Salimi & Dianat, 2022).

The data were analyzed using the Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics, including frequencies, means, and percentages, were used to summarize the socio-demographic characteristics and mental health outcomes. Inferential statistics, such as Analysis of Variance (ANOVA), were applied to examine differences in mental health outcomes across demographic groups. Regression analysis was conducted to identify significant predictors of suicide ideation, perceived stress, and quality of life. This analytical approach aligns with best practices in ex post facto designs, where regression techniques help uncover relationships between variables (Nguyen, 2016).

The study adhered to strict ethical guidelines to ensure the safety and rights of participants. Ethical approval was obtained from the Covenant University Ethical Review Board, guaranteeing that the research complied with established ethical standards. Informed consent was obtained from all participants after they were briefed on the study's objectives, procedures, and confidentiality measures. Participation in the study was entirely voluntary, and respondents were informed of their right to withdraw at any time without penalty. To maintain confidentiality, all data were anonymized, and access was restricted to authorized researchers. These measures are consistent with ethical protocols outlined in similar ex post facto studies (Goodman-Scott & McMahon, 2022; Mohamadian et al., 2015).

Results

Demographic Characteristics of the Sample

The demographic profile of the study participants is summarized in Table 1. A total of 4,930 undergraduates participated, comprising 36.7% males and 63.3% females. Most participants (76.2%) were aged 18–24, while smaller proportions fell within other age brackets, such as 25–34 years (14.6%) and below 18 years (7.3%). In terms of religion, Christianity was predominant among participants (71%), with 9.7% identifying as Muslims and 19.3% either not disclosing their religion or identifying with other beliefs. Marital status data revealed that the majority of participants were single (84.1%), with only a small percentage being married (3.7%).

Regarding academic level, students in 200 level constituted the highest proportion (36.3%), followed by 100 level (25.2%) and 300 level (20.4%). Final-year (400-level)

students accounted for 13.3%, while fewer participants were in higher levels such as 500 (4.3%) and 600 (0.6%).

Table 1: Demographic Characteristics of the Study Sample

Characteristic	Male (N = 1807)	Female (N = 3123)	Total Sample (N = 4930)
Age Group			
<18	107 (5.9%)	255 (8.2%)	362 (7.3%)
18-24	1309 (72.4%)	2450 (78.5%)	3759 (76.2%)
25-34	346 (19.1%)	372 (11.9%)	718 (14.6%)
35-44	35 (1.9%)	38 (1.2%)	73 (1.5%)
45-54	8 (0.4%)	7 (0.2%)	15 (0.3%)
>54	2 (0.1%)	1 (0.03%)	3 (0.1%)
Religion			
Christianity	1163 (64.4%)	2336 (74.8%)	3499 (71%)
Islam	259 (14.3%)	220 (7%)	479 (9.7%)
Missing	385 (21.3%)	567 (18.2%)	952 (19.3%)
Marital Status			
Single	1477 (81.7%)	2669 (85.5%)	4146 (84.1%)
Married	57 (3.2%)	125 (4%)	182 (3.7%)
Others	16 (0.9%)	25 (0.8%)	41 (0.8%)
Missing	257 (14.2%)	304 (9.7%)	561 (11.4%)
Level of Study			
100	382 (21.1%)	858 (27.5%)	1240 (25.2%)
200	724 (40.1%)	1065 (34.1%)	1789 (36.3%)
300	405 (22.4%)	600 (19.2%)	1005 (20.4%)
400	176 (9.7%)	479 (15.3%)	655 (13.3%)
500	101 (5.6%)	110 (3.5%)	211 (4.3%)
600	19 (1.1%)	11 (0.4%)	30 (0.6%)

Mental Health Outcomes across Demographics

The mental health outcomes showed significant variation across demographic and regional groups.

Suicide Ideation was most prevalent in the Northcentral zone (88.8%), followed by the Southwest (49%) and Southeast (31.5%). Gender differences were also evident, with males reporting significantly higher suicide ideation scores (mean = 2.25, SD = 1.122) compared to females (mean = 2.11, SD = 1.171), a difference confirmed as statistically significant ($t = 4.257, p < 0.05$).

Table 2: Suicide Ideation by Region and Gender

Group	Mean (SD)	Prevalence (%)
Region		
Northcentral		88.8
Southwest		49
Southeast		31.5
Gender		
Male	2.25 (1.122)	
Female	2.11 (1.171)	

Fear of Missing out (FoMO) exhibited high prevalence across all regions, with the Northcentral zone recording the highest rate (97.1%), while the Southwest and Southeast zones both reported comparable rates (89.3%).

Table 3: Fear of Missing Out (FoMO) Prevalence by Region

Region	Prevalence (%)
Northcentral	97.1
Southwest	89.3
Southeast	89.3

Perceived Stress demonstrated significant variations by both region and academic level. The Southeast zone reported the highest prevalence of high stress (52.5%), whereas the Northcentral zone had the lowest levels of perceived stress, with 65% of participants indicating low stress. Stress levels also increased with academic level, with 400-level students reporting significantly higher stress levels than their counterparts in 100, 200, and 300 levels.

Table 4: Perceived Stress across Regions and Academic Levels

Group	Prevalence of High Stress (%)	Prevalence of Low Stress (%)
Region		
Southeast	52.5	
Northcentral		65
Academic Level		
100 Level		
200 Level		
300 Level		
400 Level	High	

Quality of Life varied regionally, with the Northcentral zone reporting the highest proportion of "high quality of life" (49.3%). Conversely, the Southwest zone had the lowest quality of life, with 56.4% of participants categorized as having low quality of life.

Table 5: Quality of Life by Region

Region	High Quality of Life (%)	Low Quality of Life (%)
Northcentral	49.3	
Southwest		56.4

Statistical Findings

Regression analysis revealed that quality of life was a significant positive predictor of suicide ideation (**B = 0.428, p < 0.05**), indicating that lower quality of life was associated with higher levels of suicidal thoughts. Conversely, perceived stress (**B = -0.083, p < 0.05**) and fear of missing out (FoMO) (**B = -0.134, p < 0.05**) were significant negative predictors of suicide ideation. Together, these predictors explained 9.1% of the variation in suicide ideation (**R² = 0.091**).

Regional analysis revealed that the predictive model performed differently across geopolitical zones. The Northcentral zone demonstrated the strongest correlation between predictors (**R = 0.465**), accounting for 21.7% of the variation in suicide ideation. By contrast, the Southeast and Southwest zones showed weaker correlations (**R = 0.083** and **R = 0.218**, respectively).

Table 6: Regression Analysis Predicting Suicide Ideation

Predictor	Beta Coefficient (B)	Significance (p-value)
Quality of Life	0.428	< 0.05
Perceived Stress	-0.083	< 0.05
Fear of Missing Out (FoMO)	-0.134	< 0.05

Discussion

The findings of this study provide critical insights into the relationship between demographic characteristics and mental health outcomes among Nigerian undergraduates. These results underscore the complex interplay of gender, age, academic level, regional differences, religion, and marital status in shaping mental health challenges such as suicide ideation, perceived stress, and quality of life.

Gender Implications

The significantly higher levels of suicide ideation among male participants compared to females align with sociocultural expectations and pressures often placed on men in Nigerian society. Traditional norms emphasize emotional stoicism and discourage men from seeking help, potentially leading to internalized stress and heightened mental health vulnerabilities. This observation is consistent with global research, which highlights how gender roles and stigma disproportionately impact men’s mental health (Cleary, 2017; Oyetunji et al., 2021). Men’s reluctance to seek psychological support, even when experiencing severe distress, has been reported in similar contexts, suggesting the need for targeted interventions that challenge harmful gender norms (Emslie et al., 2020).

Age and Academic Level

Stress levels were notably higher among 400-level students, likely due to academic demands and uncertainties associated with transitioning into post-graduation life. Younger students, particularly those aged 18–24, also demonstrated heightened vulnerability to stress and anxiety. These findings are consistent with Mortier et al. (2018), who observed similar age-related trends in stress susceptibility, citing developmental factors and limited coping mechanisms as key contributors. Furthermore, studies in African university contexts have highlighted how final-year students face compounding pressures from academic workloads, career uncertainties, and societal expectations (Asante & Andoh-Arthur, 2015). These findings underscore the need for tailored mental health interventions, such as stress management programs, specifically targeting final-year students.

Regional Differences

Regional disparities in mental health outcomes were evident, with the Northcentral zone recording the highest levels of suicide ideation and fear of missing out (FoMO), alongside the highest proportion of participants reporting high quality of life. These findings suggest that socio-economic conditions, cultural norms, and regional inequalities in access to mental health resources may play a critical role. For instance, cultural attitudes in the Northcentral region may encourage the expression of distress but simultaneously lack sufficient support mechanisms for mental health care. Similar regional disparities in mental health outcomes have been reported in other studies from sub-Saharan Africa, where socio-economic conditions shape both mental health risks and access to care (Van der Walt et al., 2020). Addressing these disparities requires a context-sensitive approach that incorporates regional dynamics into intervention design.

Religion and Marital Status

Religion emerged as a potentially protective factor against severe mental health outcomes, with 71% of participants identifying as Christian and 9.7% as Muslim. Religious involvement often provides a sense of community, purpose, and social support, which can buffer against stress and suicide ideation. This aligns with findings by Labinjo et al. (2020), who emphasized the role of religious engagement in fostering resilience among Nigerian undergraduates. However, marital status appeared to have limited influence on mental health outcomes, likely due to the predominantly single sample (84.1%). While previous research has identified marital status as a factor influencing mental health, the lack of diversity in marital status within this study's sample limits its relevance as a predictive variable (Akram et al., 2022).

Comparison with Literature

The study's findings align with global research underscoring the role of demographic variables in shaping mental health outcomes. Mortier et al. (2018) observed similar trends in younger students and males reporting higher levels of suicide ideation in the WHO World Mental Health Surveys. However, the regional disparities and high prevalence of FoMO observed in Northcentral Nigeria highlight unique cultural and socio-economic factors that are less frequently addressed in global literature. Studies such as those by Van der Walt et al. (2020) have emphasized the importance of localized studies in capturing the nuances of mental health challenges in diverse populations. This reinforces the need for culturally sensitive approaches to mental health research and intervention.

Implications for Intervention

The findings underscore the need for gender-specific and regionally tailored mental health interventions. Efforts to address male suicide ideation should focus on reducing stigma around help-seeking and promoting emotional expression through culturally appropriate programs. Stress management initiatives targeting final-year students can alleviate the unique pressures they face, while regional disparities call for decentralized mental health resources to address varying needs across geopolitical zones. Additionally, leveraging religious communities as support systems may provide culturally sensitive pathways to improve mental health outcomes. These strategies, informed by the findings of this study, can help create more inclusive and effective mental health programs for Nigerian undergraduates.

Conclusion

This study highlights the significant role of demographic characteristics in shaping mental health outcomes among Nigerian undergraduates. Gender, age, academic level, religion, marital status, and regional differences were all found to be critical factors influencing mental health challenges such as suicide ideation, perceived stress, and quality of life. Male students reported higher levels of suicide ideation, while 400-level students exhibited significantly elevated stress levels, likely linked to academic and transitional pressures. Regional disparities, particularly the high prevalence of suicide ideation and FoMO in the Northcentral zone, underscore the socio-cultural and economic contexts that impact mental health outcomes. Additionally, religion appeared to serve as a protective factor, while marital status had limited influence due to the predominantly single sample.

The findings of this study have important implications for policy and practice. Nigerian universities should prioritize implementing targeted mental health interventions that address the specific needs of diverse demographic groups. Gender-sensitive programs that encourage help-seeking behaviors among male students are essential, as is the establishment of campus-based stress management initiatives tailored to the unique challenges of final-year students. Regional disparities call for decentralized mental health resources, ensuring equitable access across different zones. Universities can also leverage religious and community structures as culturally appropriate mechanisms for supporting students' mental health.

Future research should build on the findings of this study by employing longitudinal designs to explore causal relationships between demographic variables and mental health outcomes. Such studies can provide deeper insights into the dynamics of mental health challenges over time, enabling more precise interventions. Further exploration of underrepresented variables, such as socioeconomic status and

institutional differences, could also enhance understanding of the multifaceted factors influencing student mental health in Nigeria.

By addressing these critical areas, stakeholders in Nigerian higher education can make meaningful strides toward improving the mental well-being of undergraduates, fostering healthier and more productive academic environments.

References:

1. Adewuya, A. O., Atilola, O., Ola, B. A., & Coker, O. A. (2018). Prevalence, comorbidity, and associated factors for symptoms of depression and generalized anxiety in the Lagos State Mental Health Survey (LSMHS), Nigeria. *Comprehensive Psychiatry*, 84, 28–35.
2. Akram, U., Ypsilanti, A., & Gardani, M. (2022). The mediating role of sleep in the relationship between marital status and mental health outcomes. *Psychology & Health*, 37(4), 456–469.
3. Asante, K. O., & Andoh-Arthur, J. (2015). Prevalence and determinants of depressive symptoms among university students in Ghana. *Journal of Affective Disorders*, 171(1), 161–166.
4. Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., & Kessler, R. C. (2018). WHO World Mental Health Surveys International College Student Project: Prevalence and distribution of mental disorders. *Journal of Abnormal Psychology*, 127(7), 623–638.
5. Bello, A. A., & Ajayi, A. (2019). Mental health challenges among university students in Nigeria: Implications for student counseling and support services. *Journal of Social Behavior*, 60(1), 23–32.
6. Cleary, A. (2017). The gendered landscape of suicide: Masculinities, emotions, and culture. *Social Science & Medicine*, 195(1), 16–22.
7. Eke, O. J., Okoro, C. C., & Ozoemena, I. S. (2021). Regional disparities in mental health services and their impact on Nigerian students. *African Journal of Health Economics*, 10(2), 87–96.
8. Emslie, C., Ridge, D., Ziebland, S., & Hunt, K. (2020). Men's accounts of depression: Reconstructing or resisting hegemonic masculinity? *Social Science & Medicine*, 166(1), 58–65.
9. Goodman-Scott, E., & McMahon, G. (2022). An ex-post facto study examining implementation of positive behavioral interventions and supports across school and community variables. *Journal of Positive Behavior Interventions*, 24(3), 234–245. Retrieved from SAGE
10. Labinjo, T., Serrant, L., & Ashmore, R. (2020). Perceptions, attitudes, and cultural understandings of mental health in Nigeria: A scoping review of published literature. *Mental Health, Religion & Culture*, 23(5), 427–440.

11. Mohamadian, F., Khorshidi, A., & Faramarzi, S. (2015). *The prevalence of mental disorders among Iranian rural population during 1996–2005: An epidemiology of ex-post facto study*. *Der Pharmacia*, 7(5), 1–12. Retrieved from Medilam
12. Mortier, P., Auerbach, R. P., Alonso, J., Axinn, W. G., & Bruffaerts, R. (2018). *Suicidal thoughts and behaviors among college students: Results from the WHO World Mental Health Surveys*. *Social Psychiatry and Psychiatric Epidemiology*, 53(3), 341–351.
13. Nguyen, A. (2016). *Factors predictive of nurse engagement by specialty: A three-year ex-post facto study*. *Journal of Health Behavior Research*, 12(1), 78–89. Retrieved from Pro Quest.
14. Oyetunji, T. P., Arafat, S. M. Y., Famori, S. O., & Akande, O. (2021). *Suicide in Nigeria: Observations from the content analysis of newspapers*. *General Psychiatry*, 34(1), 1–9.
15. Pareek, A., & Joshi, U. A. (2018). *Relationship between attachment style and body mass index of children using ex-post facto research design*. *Journal of Clinical & Diagnostic Research*, 12(3), 345–352. Retrieved from Academia.
16. Salimi, M., & Dianat, I. (2022). *Cognitive and balance performance of older adult women during COVID-19 pandemic quarantine: An ex-post facto study*. *Menopause Review*, 21(4), 401–407. Retrieved from Termedia.
17. Sharp, J., & Theiler, S. (2018). *A review of psychological distress among university students: Pervasiveness, implications, and potential points of intervention*. *International Journal for the Advancement of Counselling*, 40(4), 407–423.
18. Ugwuanyi, C. S., & Okeke, C. C. (2022). *Sociodemographic determinants of librarians' psychological wellbeing: An ex-post facto research*. *Library Philosophy and Practice*, 34(2), 56–62. Retrieved from EBSCOhost
19. Van der Walt, S., Swartz, L., & Chiliza, B. (2020). *Mental health inequalities in sub-Saharan Africa: Mapping global mental health priorities*. *Global Health Action*, 13(1), 1775062.