



**PREVALENCE OF ANXIETY, DEPRESSION AND PSYCHOTROPIC DRUG USAGE
AMONG UNDERGRADUATE STUDENTS IN NIGER DELTA REGION, NIGERIA**

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ABSTRACT

The mental health of University students is a growing concern globally, particularly regarding anxiety, depression, and psychotropic drug usage. Nigerian undergraduates face significant academic, social, and economic pressures, which have been linked to rising mental health issues. This study investigated the prevalence and relationships between anxiety, depression, and psychotropic drug usage among undergraduate students at the University of Port Harcourt. Using a cross-sectional survey, data were collected from 392 distributed questionnaires, of which 320 were retrieved, and 300 valid responses were analyzed. The sample included students from the Faculties of Engineering, Basic Medical Sciences, and Pharmaceutical Sciences, selected for their heightened academic demands. A stratified random sampling technique ensured proportional representation. Data collection was conducted via a structured questionnaire incorporating the Depression, Anxiety, and Stress Scale (DASS-21) and items on psychotropic drug usage. The results revealed high levels of anxiety and stress (grand mean = 3.45), with prominent issues such as feeling nervous or anxious (Mean = 3.65) and being overwhelmed by academic workload (Mean = 3.62). Depression levels were moderate (grand mean = 3.01), with fatigue or low energy notably high (Mean = 3.45) but low levels of self-harm ideation (Mean = 2.10). Psychotropic drug usage was also moderate (grand mean = 2.61), primarily for situational stress relief. Dependency on these substances was low (Mean = 2.20), reflecting cautious engagement with drugs. Statistical analyses showed a significant correlation between anxiety and depression ($r = 0.70$), and a moderate correlation between stress and psychotropic drug usage ($r = 0.52$). Socioeconomic factors such as monthly allowance, employment status, and living arrangements significantly influenced anxiety and depression, explaining 30% and 27% of the variance, respectively. Stress-induced anxiety ($\beta = 0.40$) and depression ($\beta = 0.35$) were strong predictors of psychotropic drug usage, with the model explaining 45% of the variance. The study findings contribute to the fields of clinical pharmacy and behavioral sciences by emphasizing the critical role of socioeconomic factors and mental health in psychotropic drug usage.

KEYWORDS: Prevalence, Anxiety, depression, psychotropic drug usage, undergraduate students.

INTRODUCTION

Background of the Study

Globally, mental health issues like anxiety and depression are pervasive, affecting millions annually.^[1] Depression, clinically known as major depressive disorder, is characterized by persistent negative feelings that impact on individual's mood, thoughts, and actions. People with depression often feel hopeless, sad, and disinterested in previously enjoyable activities. Anxiety, similarly, is a natural response to stress; however, anxiety disorders manifest as excessive fear or worry, severely affecting daily functioning. These mental health challenges significantly impair quality of life, productivity, and social engagement, and in severe cases, may contribute to suicide.^[2] According to Mofatteh in a

study,^[3] University students, particularly undergraduates, are highly susceptible to anxiety and depression due to various academic and personal pressures. Studies,^{[4],[5]} showed a concerning increase in mental health issues among University students, including elevated levels of anxiety and depression. The academic environment can be demanding, with rigorous curricula, intense workloads, and limited time for personal relaxation, which heightens stress. These psychological challenges among University students are now recognized as a pressing public health issue. A survey^[6] revealed that nearly half of college students met the criteria for at least one mental health condition within the past year. Similarly, in Canada, over 34% of students reported experiencing significant anxiety and depression within

year of study.^[1] Other studies,^{[7],[8]} highlighted variability in the prevalence of anxiety and depression among University students across regions, with studies showing that 45.3% of North American students experience depression and 48.1% experience anxiety. In Asia, 66.86% of students reported depression, while 57.39% reported anxiety. In Africa, study found that among medical students, 88.8% experienced depression and 82.6% experienced anxiety.^{[4],[9]} The study specifically focused on health science students, such as those in medicine, pharmacy, and nursing, due to the heightened academic demands and pressures associated with these fields. These studies highlighted that in such programs, students often face extensive workloads, frequent examinations, and high expectations, which contribute to increased levels of anxiety and depression.

Gender differences are also evident in some studies^{[10],[11]} with female students generally reporting higher rates of anxiety and depression than their male counterparts. Additionally, factors such as family history of mental illness, low socioeconomic status, and high-stress levels increase the likelihood of mental health challenges among undergraduates. In response, some students resort to psychotropic drugs, which are medications that affect mood, perception, and behavior, including antidepressants, stimulants, anxiolytics, and antipsychotics.^[12]

The academic pressures, competitive atmosphere, and sleep deprivation experienced by University students contribute to high levels of stress, anxiety, and depression, leading to negative physical and mental health outcomes. Consequentially, over the past decade, psychotropic drug usage among adolescents and young adults has risen worldwide, reflecting an increasing reliance on medication to manage mental health symptoms among students.^[13] Alsolais,^[14] pointed out that for students experiencing high levels of stress and anxiety, psychotropic drugs may be perceived as a coping resource to alleviate negative mental health symptoms. In their study Deasy et al,^[15] explained this relationship between stress, anxiety, and coping mechanisms such as psychotropic drug usage, using the Transactional Model of Stress and Coping by Lazarus and Folkman (1984). This model posits that individuals respond to stress based on their appraisal of the situation and available coping resources. The theory helps explain why, under intense academic and personal pressures, students might turn to medication as a means of managing their mental health. The relationship between academic stress, mental health, and coping mechanisms among University students has been examined extensively in literature across different regions and fields of study. However, the extent to which these pressures and the resultant anxiety and stress prompt the use of psychotropic drugs among undergraduate students, specifically within the University of Port Harcourt, is yet to be fully explored. This study aims to bridge this gap by examining the relationship between anxiety,

depression and psychotropic drug usage among undergraduate students in the University of Port Harcourt. The prevalence of mental health challenges, particularly anxiety and stress, is increasingly prominent among undergraduate students globally, and the University of Port Harcourt is no exception. These mental health issues, marked by excessive worry, persistent fear, overwhelming academic stress, and emotional instability, can hinder students' well-being and academic success.^[16] For many, the difficulty of managing academic pressures, personal responsibilities, and financial concerns exacerbates these issues, often leading students to rely on psychotropic drugs as a means of coping. This dependency on psychotropic medications—such as anxiolytics, antidepressants, and stimulants—raises concerns about misuse, side effects, and the potential for long-term dependency among students.^[14] At the University of Port Harcourt, the manifestations of this problem are evident. Rising academic demands, lack of adequate mental health resources, and limited access to emotional support create an environment that heightens stress and anxiety among students. Many undergraduates experience feelings of hopelessness, prolonged worry, social withdrawal, and even suicidal ideation due to the intensity of their academic and personal struggles, highlighting a higher incidence of anxiety and depression in students who report feeling unable to manage the pressures of academic and social expectations.^[7] Consequently, the reliance on psychotropic drugs as a coping mechanism, rather than addressing the root causes of stress and anxiety, has become increasingly prevalent.^[15] If left unaddressed, this dependence on psychotropic drugs for managing anxiety and stress could lead to significant long-term consequences. Beyond the risk of drug dependency, improper use of these medications can interfere with students' cognitive functioning, and emotional resilience, reducing their ability to cope with stress in healthy ways. Additionally, widespread psychotropic drug use can exacerbate mental health problems, potentially undermining students' academic potential and overall well-being. This study, therefore, seeks to investigate the factors contributing to psychotropic drug usage among undergraduate students in the University of Port Harcourt, aiming to offer insights that will guide mental health interventions and promote healthier coping mechanisms within the University community.

A range of studies highlight the concerning prevalence of anxiety and depression among undergraduate students, and its relationship with psychotropic drug usage.^[4] The study investigated stress, anxiety, and depression (SAD) prevalence among health sciences students and found that 65% experienced stress, 85.1% anxiety, and 51.4% depression. The main risk factors identified included poor sleep quality and fatigue, with specific associations between academic year and stress level. Notably, students in medical imaging faced higher SAD levels, suggesting program-specific stressors. The authors

advocate for regular screening and targeted support strategies to manage SAD among these students. Similarly, a study^[7] conducted a comprehensive review of literature on depression and anxiety among health science undergraduates, revealing high variability in prevalence (5.8% to 82.6% for anxiety, 2.1% to 88.8% for depression). Their review identified factors such as socioeconomic status, family mental health history, and academic workload as major correlates. They recommend implementing preventive interventions, such as mental health support services and coping strategies tailored to address academic and personal pressures faced by these students. Another study^[10] examined the mental health experiences of pharmacy and medical students, highlighting significant differences in anxiety rates (21% in pharmacy students vs. 11% in medical students) and in help-seeking behaviors. Pharmacy students displayed higher stigma and reluctance to seek support from campus counseling services, illustrating a critical barrier to mental health treatment. The authors suggest enhancing mental health resources on campus and addressing stigma to improve help-seeking attitudes, especially among pharmacy students. Some other study^[12] focused on medical students in Egypt, identifying that 62.4% experienced stress, 64.3% anxiety, and 60.8% depression, with higher scores notably associated with female gender, age, and overweight. Their findings underscore the vulnerability of certain demographics to psychological distress, urging further investigation into academic and environmental factors that may exacerbate SAD among medical students. Furthermore, study^[15] explored on psychological distress among nursing and education students in Ireland, showing that 41.9% were psychologically distressed due to pressures such as academics, finances, and social obligations. Distinct coping strategies like escape-avoidance, which included substance use, were prevalent among distressed students, particularly males. Their study highlights the need for effective coping interventions and lifestyle counseling within college support systems to mitigate maladaptive behaviors linked to distress. The reviewed studies align closely with the current study's focus on the high prevalence of stress, anxiety, and depression among health sciences students. Each study highlights significant anxiety and depression prevalence and its associated risk factors, such as academic pressures, socio-demographic influences, and lifestyle behaviors. Despite these similarities, a notable gap exists in the literature regarding the extent to which identifiable stressors within the University environment and the resultant anxiety and depression prompt the use of psychotropic drugs among undergraduate students. This gap is what the current study seeks to address, particularly within the University of Port Harcourt context.

METHOD

Study Area

This study was conducted among undergraduate students in University of Port Harcourt, located in Rivers State, in Niger Delta Region, Nigeria.

Research Design

The study employed a cross-sectional survey design to assess the prevalence and relationships between anxiety, depression, and psychotropic drug usage among undergraduate students in the University of Port Harcourt. A survey design was chosen because it allowed for data collection from a large sample within a specific timeframe, providing a snapshot of the current mental health and psychotropic drug usage among the students of interest.

Study Population

The population for this study consisted of undergraduate students from three faculties at the University of Port Harcourt: Basic Medical Sciences, Pharmaceutical Sciences, and Engineering. These faculties were randomly chosen due to the high academic demands and stress associated with health and engineering disciplines, which could contribute to higher levels of anxiety, depression, and potential drug usage. Based on estimates provided by the faculty officers, the population size was approximately: Engineering: 5,000 students; Basic Medical Sciences: 2,000 students; Pharmaceutical Sciences: 1,000 students. This brings the total population to 8,000 students across the three faculties.

Sampling Technique/Sample Size Determination

Stratified random sampling was used to ensure that each Faculty was proportionately represented. The sampling of participants was guided by a specific set of inclusion and exclusion criteria. Participants were included if they were undergraduate students of the three faculties used in the study (pharmacy, engineering and medicine) and if they expressed a willingness to participate. Those who did not fit the criteria were excluded from the study. Being a defined and relatively large population, the sample size was determined using Taro Yamane's formula:

$$n = \frac{N}{1 + N(e)^2} \quad \text{where:}$$

N = The total population size (8,000 students),

E = The margin of error, set at 5% for this study.

Substituting these values

$$n = 8000 / (1 + 8000(0.0025)^2) = 381$$

Thus, the calculated sample size was approximately 381 students. However, due to practical constraints, the sample size was adjusted to 300 (drawing 100 from each faculty). This adjustment was made to ensure the feasibility of the study while still maintaining a representative sample that can provide reliable and valid results.

Data Collection Method

Primary data was utilized in this study to gather insights directly from the target population. Data collection was carried out using a well-structured questionnaire, which was created as a Google Form for ease of distribution and accessibility. The form link was shared on the respective WhatsApp group chat platforms of the penultimate and final-year classes across the three selected faculties—Engineering, Basic Medical Sciences, and Pharmaceutical Sciences.

The questionnaire consisted of both closed-ended and scaled questions, allowing for quantitative data on key variables such as anxiety levels, stress levels, and psychotropic drug usage among undergraduate students. The questionnaire was organized into three parts: Part 1. Demographic Information: This section captured participants' faculty, gender, age, and socioeconomic background. Part 2. Anxiety and Depression Levels: Questions in this section assessed participants' experiences with anxiety and stress, using a standardized scale (DASS-21) to measure severity. Part 3. Psychotropic Drug Usage: This section included questions about the types, frequency, and reasons for psychotropic drug use among students experiencing anxiety and stress. Once data collection was completed, the responses were sorted by faculty, and 100 responses from each faculty were randomly selected to ensure balanced representation. This random sampling from each faculty allowed for a manageable dataset and helped achieve a sample size reflective of each group within the population. This approach also enhanced the reliability and validity of the findings across the three faculties involved in the study.

Validity and Reliability of the Instrument

The content validity of the questionnaire was achieved through an extensive review by the researcher's

supervisor, who assessed the relevance and clarity of the items. Face validity was also achieved by pretesting the instrument with a small group of 20 students who were not part of the final sample. Feedback was used to make necessary adjustments to the questionnaire items. For reliability, Cronbach's alpha was calculated for the DASS-21 subscales (anxiety and stress) and for the psychotropic drug usage questions. The result for each item of the questionnaire provided values that exceeded the acceptable threshold of 0.70, the overall Cronbach value was given as 0.82, indicating acceptable internal consistency.

Ethical Approval

Ethical approval for this study was obtained from the University of Port Harcourt Ethics Committee. The ethical principles of voluntary participation, informed consent, confidentiality, and non-maleficence were strictly adhered to. Participants were fully briefed about the study's objectives and assured that their responses would remain anonymous.

Data Analysis Techniques: Data from completed questionnaires were coded and analyzed using Statistical Package for Social Sciences (SPSS) version 25.0. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to present demographic information and prevalence rates of anxiety, stress, and psychotropic drug usage. To address the study's objectives: Logistic regression analysis was applied to determine socioeconomic factors contributing to anxiety and depression prevalence. Pearson's correlation analysis was conducted to assess the relationship between stress levels and psychotropic drug usage likelihood.

RESULT

Table 1: Demographic Distribution of Respondents.

S/N	Demographic Variable	Frequency (N=300)	Percentage (%)
1.	Age		
	17–20 years	120	40%
	21–24 years	150	50%
	25–28 years	24	8%
	29 years and above	6	2%
2.	Gender		
	Male	165	55%
	Female	135	45%
3.	Year of Study		
	Penultimate	183	61%
	Final year	117	39%
4.	Marital Status		
	Single	285	95%
	Married	12	4%
	Other	3	1%
5.	Monthly Allowance		
	Less than ₦20,000	90	30%

	₦20,000–₦50,000	120	40%
	₦51,000–₦80,000	60	20%
	Above ₦80,000	30	10%
6.	Living Arrangements		
	University hostel	120	40%
	Off-campus apartment	135	45%
	With family	30	10%
	Other	15	5%
7.	Employment Status		
	Full-time student (unemployed)	180	60%
	Part-time work	90	30%
	Self-employed	30	10%
8.	Parent(s) Level of Education		
	Primary school	45	15%
	Secondary school	95	31%
	Tertiary education	145	48%
	Others	15	5%

Source: Field Data, 2024

The demographic distribution of respondents reflects a diverse sample of undergraduate students at the University of Port Harcourt. A significant majority of the participants fall within the 17–24 age range, which is typical for undergraduates, indicating that the respondents are mostly young adults likely experiencing academic pressures and related stress. Gender-wise, there is a slightly higher representation of male students (55%) compared to female students (45%), which may contribute to nuanced differences in stress and anxiety experiences based on gender.

Regarding the year of study, the study only considered penultimate and final-year students. This balance provides insight into stress levels as students near the completion of their studies, facing academic and professional pressures related to graduation and future career prospects. Socioeconomic factors reveal that most students have monthly allowances below ₦50,000 (70%), reflecting moderate to low financial backgrounds, which could correlate with increased stress, especially if financial strain is a concern. Living arrangements show a majority residing in University hostels or off-campus housing (85%), which may influence their independence and responsibility levels, potentially impacting stress and anxiety.

Most respondents are full-time students without employment (60%), although a considerable portion (30%) engages in part-time work, suggesting that

balancing academic and work commitments could contribute to higher stress. Finally, nearly half of the respondents reported parents with tertiary education, while 31% had parents with secondary school education, indicating varying degrees of familial educational support. This demographic profile provides an in-depth view of the student population, supporting an analysis of the prevalence and impact of anxiety, depression, and psychotropic drug usage in this academic setting.

Descriptive Analyses of Study Variables

This section presents the descriptive analyses of the primary study variables: Anxiety and Stress Levels, Depression Levels, and Psychotropic Drug Usage among undergraduate students at the University of Port Harcourt. Descriptive statistics, including mean and standard deviation, were used to summarize and interpret respondents' experiences and behaviors regarding each variable. By analyzing the frequency and intensity of symptoms related to anxiety, stress, and depression, alongside patterns in psychotropic drug usage, these results offer insights into the mental health and coping mechanisms of the student population. The following tables provide a detailed breakdown of the responses, allowing for an understanding of how prevalent and significant these issues are among students. The findings from these analyses not only highlight areas of concern but also offer a foundation for further examination into the factors influencing mental health and substance use patterns in this academic setting.

Table 2: Descriptive Statistics on Items of Anxiety and Stress Levels.

(N = 300)

Variables	Mean	SD	Decision Rule
Frequency of feeling nervous or anxious	3.65	0.87	High
Feeling overwhelmed by academic workload	3.62	0.91	High
Experiencing headaches or physical symptoms	3.35	0.92	Moderate
Trouble sleeping due to stress or worry	3.52	0.89	High
Anxiety in social situations or around peers	3.10	0.84	Moderate
Grand Mean	3.45		High

Source: IBM SPSS version 25.0 Output, 2024

The results show that the students experience relatively high levels of anxiety and stress. High mean values for items like "feeling nervous or anxious" (Mean = 3.65) and "feeling overwhelmed by academic workload" (Mean = 3.62) indicate frequent experiences of academic stress. This suggests that academic pressures are

significant contributors to stress levels among undergraduates at the University of Port Harcourt. The grand mean of 3.45 falls above the criterion mean of 3.0, indicating an overall high level of anxiety and stress among students.

Table 3: Descriptive Statistics on Items of Depression Levels.

(N = 300)

Variables	Mean	SD	Decision Rule
Feeling sad or hopeless for extended periods	3.25	0.86	Moderate
Losing interest or pleasure in daily activities	3.00	0.78	Moderate
Experiencing fatigue or low energy	3.45	0.88	High
Difficulty concentrating on daily tasks	3.30	0.85	Moderate
Feeling worthless or excessively guilty	2.95	0.79	Moderate
Frequent thoughts of self-harm or death	2.10	0.91	Low
Grand Mean	3.01		Moderate

Source: IBM SPSS version 25.0 Output, 2024

The depression levels among students are moderate, as indicated by a grand mean of 3.01. The highest mean value is found in "experiencing fatigue or low energy" (Mean = 3.45), suggesting that students frequently face exhaustion, possibly due to their academic workload or lifestyle. Lower scores on items like "frequent thoughts

of self-harm or death" (Mean = 2.10) suggest that while some depressive symptoms are common, they are not severe among most students. Overall, the responses indicate moderate levels of depressive symptoms among the student population.

Table 4: Descriptive Statistics on Items of Psychotropic Drug Usage.

(N = 300)

Variables	Mean	SD	Decision Rule
Ever used psychotropic drugs without a prescription	2.80	1.10	Moderate
Frequency of psychotropic drug usage	2.45	0.98	Low
Types of substances used (e.g., stimulants)	2.90	0.88	Moderate
Feeling dependent on substances	2.20	1.02	Low
Reasons for usage (e.g., to relax or concentrate)	2.70	0.95	Moderate
Grand Mean	2.61		Moderate

Source: IBM SPSS version 25.0 Output, 2024

Psychotropic drug usage among students is generally moderate, with a grand mean of 2.61. The highest mean score is for "types of substances used" (Mean = 2.90), which suggests that students occasionally use stimulants or other substances, though not necessarily frequently. The relatively low mean for "feeling dependent on substances" (Mean = 2.20) indicates that substance dependency is not widespread. These findings suggest moderate but cautious engagement with psychotropic.

Correlation between Anxiety and Depression: To investigate the prevalence of anxiety and depression among undergraduate students. A Pearson correlation analysis was conducted to assess the strength and direction of the relationships among stress induced anxiety and depression scores. Table 5 shows the results:

Table 5: Correlation Analysis of Anxiety and Depression.

(N = 300)

Variables	Anxiety	Depression
Anxiety	1	0.70**
Depression	0.70**	1

Note:: $p < 0.01$ indicates a statistically significant relationship.

Source: IBM SPSS version 25.0 Output, 2024

The correlation table reveals strong, positive correlations among anxiety and depression (0.70). This suggests that students who report higher levels of stress induced anxiety also tend to experience higher levels of depression. The positive correlations also indicate that as stress increases, anxiety and depression tend to increase, showing a pattern of co-occurrence among the variables.

Correlation Between Stress Level and Psychotropic Drug Usage: To assess the relationship between stress

levels and the likelihood of psychotropic drug usage among students. Pearson correlation between stress levels and frequency of psychotropic drug usage. Stress

level was determined by analyzing items on stress-induced anxiety. The result is shown as:

Table 6: Correlation Analysis of Stress Level and Psychotropic Drug Usage.

(N = 300)

Variables	Stress	Psychotropic Drug Usage
Stress	1	0.52**
Psychotropic Drug Usage	0.52**	1

Source: IBM SPSS version 25.0 Output, 2024 (Note: $p < 0.01$ indicates a statistically significant relationship.)

There is a moderate, positive correlation (0.52) between stress levels and psychotropic drug usage. This suggests that students with higher stress levels are more likely to use psychotropic drugs, possibly as a coping mechanism. The relationship is significant, indicating that stress may play a role in the likelihood of drug usage among students.

Regression Analysis on Socioeconomic Factors Predicting Anxiety and Depression: To determine the socioeconomic factors that influence anxiety and depression among students. Multiple regression analysis was conducted with anxiety and depression scores as dependent variables, and monthly allowance, living arrangements, employment status, and parents' education level as independent variables.

Table 7: Regression Analysis of Socioeconomic Factors on Anxiety.

(N = 300)

Predictor Variable	β (Standardized Coefficient)	p-value
Monthly Allowance	-0.25	0.01
Living Arrangements	0.15	0.05
Employment Status	0.30	<0.01
Parents' Education Level	-0.10	0.10
$R^2 = 0.30, p < 0.01$ (for overall model)		

Source: IBM SPSS version 25.0 Output, 2024

The model explains 30% of the variance in anxiety scores, suggesting a moderate influence of socioeconomic factors on anxiety levels. Employment status ($\beta = 0.30, p < 0.01$) and monthly allowance ($\beta = -$

0.25, $p = 0.01$) were significant predictors, indicating that students with lower financial resources and part-time employment report higher anxiety. Living arrangements were also significant but to a lesser extent.

Table 8: Regression Analysis of Socioeconomic Factors on Depression.

(N = 300)

Predictor Variable	β (Standardized Coefficient)	p-value
Monthly Allowance	-0.20	0.02
Living Arrangements	0.22	0.03
Employment Status	0.28	<0.01
Parents' Education Level	-0.05	0.40
$R^2 = 0.27, p < 0.01$ (for overall model)		

Source: IBM SPSS version 25.0 Output, 2024

Similar to anxiety, socioeconomic factors significantly impact depression, with the model explaining 27% of the variance. Students with lower monthly allowances and part-time work status reported higher depression. Living arrangements also significantly affected depression, suggesting that students living off-campus or with family may have unique stressors impacting their mental health.

Factors Contributing to Psychotropic Drug Usage: To examine the factors contributing to psychotropic drug usage. Multiple regression analysis with psychotropic drug usage as the dependent variable, and anxiety, stress, monthly allowance, and employment status as independent variables.

Table 9: Regression Analysis on Psychotropic Drug Usage (N = 300)

Predictor Variable	β (Standardized Coefficient)	p-value
Depression	0.35	<0.01

Stress-induced Anxiety	0.40	<0.01
Monthly Allowance	-0.15	0.05
Employment Status	0.25	0.02
R ² = 0.45, p < 0.01 (for overall model)		

Source: IBM SPSS version 25.0 Output, 2024

This model indicates that stress-induced anxiety ($\beta = 0.40$) and depression ($\beta = 0.35$) are the strongest predictors of psychotropic drug usage, suggesting students experiencing high levels of stress and anxiety are more likely to use psychotropic drugs. Employment status and monthly allowance were also significant, implying that students with financial or employment pressures may turn to drug usage to cope. The model explains 45% of the variance, suggesting a strong predictive power for these factors on psychotropic drug use.

DISCUSSION

Objective I: To investigate the prevalence of anxiety and depression among undergraduate students at the University of Port Harcourt

The study revealed a significant prevalence of anxiety and depression among undergraduates at the University of Port Harcourt. This finding aligns with similar studies that emphasize mental health as a growing issue in university settings worldwide. This aligns with, similar study^[19] that observed high rates of anxiety and depression among Egyptian University students, attributing these conditions to academic stress and socio-economic pressures. Similarly, another^[20] identified substantial levels of anxiety and depression in Turkish University students, suggesting a global trend in mental health challenges among young adults.

Implications of these findings indicate a need for targeted mental health interventions at the University level, as untreated anxiety and depression can severely impact academic performance and overall well-being. The World Health Organization (2) emphasizes early intervention and mental health awareness as critical strategies for mitigating the long-term effects of mental health disorders.

To determine the socioeconomic factors that influence the prevalence of anxiety and depression among undergraduate students in the University of Port Harcourt

Results showed that socioeconomic factors, such as family income and financial dependency, are significant predictors of anxiety and depression among students. This result is in line with report (3) that indicated that financial constraints are major stressors among University students, often leading to heightened anxiety and depressive symptoms. In addition, another study (1) discussed how socioeconomic stressors exacerbate mental health issues, especially among students with limited access to mental health resources. The findings underscore the importance of addressing socioeconomic barriers within mental health support systems.

Universities could potentially reduce mental health disparities by offering financial support services, counseling, and stress management programs. These strategies may alleviate some financial burdens that contribute to student anxiety and depression.

To examine the factors contributing to psychotropic drug usage among undergraduates experiencing anxiety and stress:

The study revealed that students experiencing high levels of anxiety and stress are more likely to use psychotropic drugs as coping mechanisms. This is consistent with findings by Degenhardt et al.,^[13] who observed increased psychotropic drug use among youth with mental health concerns. Another study^[18] highlighted similar trends in Nigerian University settings, where students often resort to medication without proper guidance due to limited access to professional mental health care. These results imply that improved mental health services and education on non-pharmaceutical coping strategies may help reduce reliance on psychotropic drugs. Integrating awareness programs about the risks of unprescribed psychotropic drug usage could empower students to seek healthier coping mechanisms, mitigating the risk of drug dependence or misuse.

To assess the relationship between stress levels and the likelihood of psychotropic drug usage among students.

The findings indicate a strong correlation between high stress levels and the likelihood of psychotropic drug use among undergraduates. Similar observations have been made in studies,^[19] which discussed how psychological factors, including stress, can influence psychopharmacological adherence and usage patterns. This result correlates with the report (4) that found that medical students, in particular, are more prone to substance use as a response to academic stress, which parallels the stress-drug usage relationship identified in this study. These results highlight the need for stress-reduction initiatives on campus, as chronic stress can exacerbate mental health issues and increase dependence on psychotropic substances. Universities could implement mindfulness programs, counseling sessions, and peer support groups to provide students with alternatives to managing stress without resorting to medication.

CONCLUSION

There is a high levels of anxiety and stress among students in University of Port Harcourt. Depression levels among the students were moderate, with a moderate level of psychotropic drug usage among them. While there is a significant relationship between anxiety and depression, there is a moderate correlation between

stress levels and psychotropic drug usage, as socioeconomic factors significantly influence anxiety and depression levels.

Authors' Contribution

The second author brought the idea. The two authors developed and designed the study. The second author collected the data, and prepared for analysis and write up. The first author review the work and send for publication.

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REFERENCES

- Freeman, M. The World Mental Health Report: Transforming mental health for all. *World Psychiatry*, 2022; 21(3): 391-391. <https://doi.org/10.1002/wps.21052>
- World Health Organization. (2001). *The World Health Report 2001: Mental health: new understanding, new hope*.
- Mofatteh, M. Risk factors associated with stress, anxiety, and depression among university undergraduate students. *AIMS Public Health*, 2020; 8(1): 36. <https://doi.org/10.3934/publichealth.2021003>
- Fauzi, M. F., Anuar, T. S., Teh, L. K., Lim, W. F., James, R. J., Ahmad, R., & Salleh, M. Z. Stress, anxiety, and depression among a cohort of health sciences undergraduate students: The prevalence and risk factors. *International Journal of Environmental Research and Public Health*, 2021; 18(6): 3269. <https://doi.org/10.3390/ijerph18063269>
- Marquez, P. V., & Saxena, S. Making mental health a global priority. In *Cerebrum: The Dana Forum on Brain Science*, 2016. Dana Foundation.
- Aluh DO, Okonta MJ, Odili VU. Cross-sectional survey of mental health literacy among undergraduate students of the University of Nigeria. *BMJ Open*, 2019; 9: e028913. doi:10.1136/bmjopen-2019-028913
- Agyapong-Opoku, G., Agyapong, B., Obuobi-Donkor, G., & Eboeime, E. Depression and anxiety among undergraduate health science students: A scoping review of the literature. *Behavioral Sciences*, 2023; 13(12): 1002. <https://doi.org/10.3390/bs13121002>
- Gewaifel, G. I., Hussein, M. M., & Ibrahim, N. N. Anxiety and depression screening in Egyptian university students: Prevalence and predictors. *Journal of High Institute of Public Health*, 2023; 53(2): 64-74. <https://doi.org/10.21608/JHIPH.2023.155153>
- Seshabela, H. D., & Shakwane, S. Impact of anxiety-related conditions on nursing students' academic excellence. *Curationis*, 2024; 47(1): 2571. <https://doi.org/10.4102/curationis.v47i1.2571>
- Fischbein, R., & Bonfine, N. Pharmacy and medical students' mental health symptoms, experiences, attitudes, and help-seeking behaviors. *American Journal of Pharmaceutical Education*, 2019; 83(10): 7558. <https://doi.org/10.5688/ajpe7558>
- Gao, W., Ping, S., & Liu, X. Gender differences in depression, anxiety, and stress among college students: A longitudinal study from China. *Journal of Affective Disorders*, 2020; 263: 292-300. <https://doi.org/10.1016/j.jad.2019.11.121>
- Wahed, W. Y. A., & Hassan, S. K. Prevalence and associated factors of stress, anxiety and depression among medical Fayoum University students. *Alexandria Journal of Medicine*, 2017; 53(1): 77-84. <https://doi.org/10.1016/j.ajme.2016.04.001>
- Degenhardt, L., Stockings, E., Patton, G., Hall, W. D., & Lynskey, M. The increasing global health priority of substance use in young people. *The Lancet Psychiatry*, 2016; 3(3): 251-264. [https://doi.org/10.1016/S2215-0366\(15\)00508-8](https://doi.org/10.1016/S2215-0366(15)00508-8)
- Alsolais, A., Alquwez, N., Alotaibi, K. A., Alqarni, A. S., Almalki, M., Alsolami, F., ... & Cruz, J. P. Risk perceptions, fear, depression, anxiety, stress, and coping among Saudi nursing students during the COVID-19 pandemic. *Journal of Mental Health*, 2021; 30(2): 194-201. <https://doi.org/10.1080/09638237.2020.1837943>
- Deasy, C., Coughlan, B., Pironom, J., Jourdan, D., & Mannix-McNamara, P. Psychological distress and coping amongst higher education students: A mixed method enquiry. *PLOS ONE*, 2014; 9(12): e115193. <https://doi.org/10.1371/journal.pone.0115193>
- Iarovici, D. *Mental health issues and the university student*. JHU Press, 2014.
- Bayram, N., & Bilgel, N. The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social Psychiatry and Psychiatric Epidemiology*, 2008; 43(8): 667-672. <https://doi.org/10.1007/s00127-008-0345-x>
- Ajibola, A. O., & Agunbiade, O. M. Suicide ideation and its correlates among university undergraduates in southwestern Nigeria. *Community Health Equity Research & Policy*, 2022; 43(1): 45-58. <https://doi.org/10.1177/0272684X211040912>
- Marrero, R. J., Fumero, A., de Miguel, A., & Penate, W. Psychological factors involved in psychopharmacological medication adherence in mental health patients: A systematic review. *Patient Education and Counseling*, 2020; 103(10): 2116-2131. <https://doi.org/10.1016/j.pec.2020.05.016>