



Contextual Predictors and Preventive Strategies of Mental Health Problems among Students of Tertiary Institutions, Federal Capital Territory, Abuja, Nigeria

George Usman Kato¹, Charles Chima Igbokwe², & Emmanuel Ejembi Anyebe^{3*}

¹Department of Education Psychology, Bingham University, Karu, Nasarawa State, Nigeria, ²Department of Human Kinetics and Health Education, University of Nigeria, Nsukka. Enugu State, Nigeria, ³Department of Nursing Science, College of Health Sciences, University of Ilorin, Kwara State, Nigeria.

Corresponding Author: Emmanuel Ejembi Anyebe

Corresponding Email: anyebe.ee@unilorin.edu.ng; ejembianyebe@gmail.com.

Orcid Id: 0000-0002-0938-3808

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Abstract

Background: This study investigated contextual predictors and preventive strategies for mental health problems among students of tertiary institutions at the Federal Capital Territory (FCT), Abuja, Nigeria. Three specific objectives and two null hypotheses guided the study. **Materials and Methods:** The correlational research design was adopted for the study. The population for the study comprised 12,578 undergraduate students. The multistage sampling procedure was used to select the study sample of 390 students. The Mental Health Problems Questionnaire (MHPQ) and Mental Health Problems Preventive Strategies Questionnaire (MHPPSQ) were used for the study. Five experts in Public Health Education validated the MHPQ. The reliability of the MHPQ was determined using the Cronbach alpha statistic. The reliability coefficients of 0.71, 0.74 and 0.88 were obtained for sections B, C, and D of the MHPQ, respectively. The MHPPSQ contained 13 items formulated based on the study's baseline findings. The data were analysed using Statistical Package for the Social Sciences (IBM SPSS version 25). Mean, standard deviation, and point-biserial correlation were used to answer research questions, while multiple regression analyses were used to test the null hypotheses 1 and 2 at a 0.05 level of significance. **Results:** Results showed that there was a positive moderate relationship between anxiety severity and students' social/environment (rbp = .37), curriculum/expectations (rbp = .32) and financial stress (rbp = .36) and a weak positive relationship between anxiety severity and students perceived academic achievement (rbp = .25) and time/balance challenge (rbp = .25). There was a positive moderate relationship between depression severity and social/environment (rbp = .32) and financial stress (rbp = .33). Furthermore, social/physical environmental challenges with higher beta values (beta = 1.091, p = 0.001) and financial stress (beta = 1.079, P < .001) were statistically significant and social/physical environmental challenges with higher beta values (beta = 1.026, p < .001) and financial stress (beta = 1.081, P < .001) were statistically significant. Health education experts also considered the formulated preventive strategies for mental health problems among students of tertiary institutions appropriate ($\bar{X}$ = 3.21; SD = 0.35). **Conclusion:** The study highlights the need for routine mental health screening programmes in tertiary institutions to identify students at risk of anxiety and depression by psychologists and mental health professionals. With the academic and other socio-economic demands of tertiary educational pursuits, students form a vulnerable group for close monitoring to prevent adopting ineffective coping strategies including recourse to psychoactive substances and other self-destructive behaviours.

Keywords: Contextual Predictors, Preventive Strategies, Mental Health Problems, Students, Tertiary Institutions, Nigeria

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Introduction

Mental health problems among students of tertiary institutions, who are young adults (ages 18 – 29 years), are relatively high globally and more frequently report struggling with symptoms of anxiety and depression (Othman et al., 2019; Sunderland & Findlay, 2019). They constitute a high-risk group for mental health conditions (Hunt & Eisenberg, 2010), with about 60 per cent of students presenting with high levels of anxiety, 40 per cent severe depression, and about 32 per cent seriously contemplating suicide (American College Health Association [ACHA], 2019). Among students who dropped out of higher education with less than a 3.0 Grade Point Average (GPA), 25 per cent screened positive for at least a mental health problem, including anxiety and depression (Douce et al., 2014). One in three students also withdraw from tertiary education without attaining the degree for which they enrolled (Organisation for Economic Co-operation & Development [OECD], 2019; Thomas, 2020). In the United Kingdom, for example, the trend is growing for students who experience mental health problems dropping out of university (Thorley, 2017). Furthermore, research evidence suggests that the students' weighted mean depression prevalence was 30.6 per cent, with figures ranging from 10 per cent to 85 per cent (Ahmed et al., 2020).

Meanwhile, there is evidence (Dickson & Gullo, 2015; Lei et al., 2016) that transitioning students to tertiary institutions is stressful. One-third of these students are considered particularly vulnerable to anxiety and depression as they navigate a new and challenging stage in their lives (Thomas, 2020). Some researchers have referred to these trends as an emerging “mental health crisis” in higher education (Evans et al., 2018; Arafat, 2019). In Nigeria, the trend is similar and worrisome. One in six young Nigerians aged 15 to 24 years said they feel depressed and anxious (UNICEF, 2021).

Anxiety is a feeling of tension, worried thoughts and physical changes, with excessive preoccupation, fatigue, problems with sleep or concentration, irritability, muscle tension, aggressive behaviour, the sensation of vulnerability, surveillance exacerbation, and exaggerated emotional reactions to danger (American Psychiatric Association, 2013). The prevalence of anxiety among students of tertiary institutions in Nigeria ranges from 63.5 per cent (Aluh et al., 2020) to 61.7 per cent (Anosike et al., 2022). Anxiety also affects academic performance and social relationships.

Depression, on the other hand, is a feeling of sadness, loss, anger or frustration which interferes with the everyday life of the individual for an extended period (APA, 2013), affecting concentration and memory, which are critical for students' academic success. Depression is the first contributor to the non-fatal health burden, with 7.5 per cent of all Years of Living with Disability (YLD) (WHO, 2017).

Meanwhile, about 20 per cent to 30 per cent of the Nigerian population is estimated to suffer from mental health problems, including anxiety and depression (Onyemelukwe, 2016). The mental health of students is a key area of health concern internationally. Mental health problems can affect students' daily living, relationships, physical health, and academic achievement. Mental health is a state of mental well-being that enables people to cope with the stresses of life, realise their abilities, learn well and work well, and contribute to their community (World Health Organisation, [WHO] 2022). It is more than just the absence of mental disorders or disabilities. Mental health also entails looking after ongoing wellness and happiness. This study considers mental health problems as constituting the presence of symptoms that indicate mental disorders as defined in the classification systems of the American Psychiatric

Association or the World Health Organisation (American Psychiatric Association [APA] 2013; WHO, 2018). Mental health problems are accompanied by more severe symptoms of anxiety and depression across different cultures (Schonfeld et al., 2016).

Until recently, little or no attention has been paid to identifying mental health problems and their predictive factors among students of tertiary institutions, such as in Nigeria. Students of tertiary institutions can be at added risk of experiencing mental health problems relative to other young people due to a combination of predictors, particularly perceived contextual stressors within the school environment, such as meeting new people/friends, adjusting to the campus environment, and academic achievement challenges (including drop-in GPA, receiving poor grades). Others include curriculum/academic expectations challenges (e.g., sitting for exams, studying for exams, handling academic workload), time/balance stressors (e.g., lack of time for friends/family, balancing work with school), and financial stressors (e.g., taking student loans and having to pay back, worrying about money). Financial pressures or brokenness coming from the increasing cost of tertiary education all lead to students' mental health problems (Marshall, 2010; Nicholson, 2017; Richardson, 2017; Onwuama, 2021).

Insufficient feedback, hostile relations with staff, lack of peer support, fear of not acquiring the knowledge needed for the future profession, and lack of interest are also associated with students' mental health problems (Stallman & Hurst, 2016; Labrague et al., 2017; Hill et al., 2018). Thus, pressure for academic achievement, defined as student retention, grade point average and obtained credits (Bruffaerts et al., 2018) or academic success, has also been reported as a significant stressor for students who are not prepared for the increase in academic expectations at the level of tertiary institutions (Jerema, 2010).

There is evidence that studying under pressure in tertiary institutions correlates significantly with anxiety and lower well-being (Centre for Education Statistics & Evaluation, 2015; Cant, 2018). Therefore, preventive strategies are crucial to averting the associated anxiety and depression among students of tertiary institutions. A preventive strategy targets risk factors, enhances protective factors and promotes mental health in individuals without a clinically diagnosable mental disorder (Arango et al., 2018), identifying at-risk students, increase help-seeking behaviour, provide mental health services following crisis management procedures, restrict access to potentially lethal means, developing life skills, and promote social networks (Jed Foundation Mental Health Action Map, 2011). To develop preventive strategies, the identification of factors that influence or predict (mental) health outcomes (Gidron, 2013) among students is thus required. These predictors are contextual, namely, social/physical environment challenges, academic achievement challenges, curriculum/expectations, time/balance challenges, and financial stress. Time management and organisational skills are critical in managing institution-related stressors, especially being able or otherwise to balance responsibilities to family, social circles, academics, and work, which has a role strain on the emerging adult, faced with multiple tasks.

The Federal Capital Territory (FCT), Abuja, Nigeria, serves as a cosmopolitan centre, with residents representing all parts of the federation of Nigeria and the West African Sub-region, making it an educational hub for young adults from diverse backgrounds. Students are at risk for experiencing anxiety and depression relative to financial difficulties (Tolu & Keskis, 2015), the influence of peer pressure, such as the use of drugs/substances, academic-induced frustration and lack of parental care (Agwogie, 2016), and are described as worrisome (Imam et al., 2019).

Mental health problems, particularly anxiety and depression among students, have attracted great attention among policy-makers and public health professionals (Mental Health Commission of Canada, 2012; Pearson, Janz, & Ali, 2013; WHO, 2013). Although mental health problems have been continually recognised among the student population of tertiary institutions elsewhere, gaps remain in the Nigerian literature. The available Nigerian studies (Gureje et al., 2010; Adewuya et al., 2018; Wada et al., 2021; Amoko et al., 2021; Nzeakah et al., 2022) either rely on population-level data (i.e., not specific to students of tertiary institutions) or are narrowly focused on individual factors and lack the scope to consider multiple factors at the same time. To the best of the authors' knowledge, no study has examined the contextual predictors and formulated preventive strategies for mental health problems for tertiary institution students in FCT, Abuja. Investigating contextual factors provides an avenue for understanding unique and specific mental health issues in the setting, and this should guide target interventions. Mental health issues are usually situation-specific, and the understanding of tertiary institution students in cosmopolitan cities constitutes an additional trigger. As observed by the researchers with supported scenarios from media reports, tertiary students are said to experience mental health problems severe enough to consider or commit suicide. Observations and a few Nigerian population-level data that are not specific to students of tertiary institutions speculate on multiple factors influencing mental health problems among undergraduate students. This study set out to fill this gap by investigating the contextual predictors and formulating targeted preventive strategies for mental health problems among students of tertiary institutions in FCT, Abuja, Nigeria.

The study specifically determined the:

(1) Relationship between anxiety severity level and perceived contextual stressors among students;

(2) Relationship between depression severity level and perceived contextual stressors among students; and

(3) Expert validation of proposed preventive strategies for mental health problems among students in FCT, Abuja

The following research hypotheses also guided the study:

(1) Perceived contextual stressors are not significant predictors of the level of anxiety severity among students; and

(2) Perceived contextual stressors are not significant predictors of the level of depression severity among tertiary institution students in FCT, Abuja

Methods and Materials

Research design: The study adopted the cross-sectional-correlational research design, conducted in FCT, Abuja, Nigeria.

Study population and sampling: The total population of tertiary institutions during the 2019/2020 academic session in the FCT comprised 12,578 students (Education Department, 2020). The sample size was determined using Taro Yamane's (1967) sample size determination Table: four hundred eight (408) students of tertiary institutions in FCT, Abuja.

A multiple-stage sampling procedure was employed to select the sample:

The first stage: The tertiary institutions were categorised or clustered into public universities, private universities, and Colleges of Education.

Stage two: The only public University was purposively selected, while a simple random sampling technique without replacement was used to select one private University one College of Education. This gave rise to three tertiary institutions (the University of Abuja, Baze University and College of Education, Zuba).

Stage three: a simple random sampling technique of balloting without replacement was used to select two faculties from two Universities and two schools from the College of Education (COE), Zuba. This gave rise to four faculties and two schools (six groups in all).

The fourth stage involved the use of a systematic sampling technique to draw four departments from each of the selected faculties and four units from the selected schools.

The fifth stage: convenience sampling was used to select seventeen students from each of the sampled departments and units.

Thus, a total of 408 students were randomly selected from three tertiary institutions in FCT, Abuja, for the study. The health experts were purposively sampled. Only lecturers in the Department of Human Kinetics and Health Education (Health Education Unit) with doctorate degrees in health education or public health education were used for the study because they were adjudged to be knowledgeable of mental health issues as psychologists.

Instrument for data collection: A questionnaire made up of two instruments was used for data collection in this study. These are the researcher-adapted Mental Health Problems Questionnaire (MHPQ) and Mental Health Problems Preventive Strategies Questionnaire (MHPPSQ). The MHPQ contained Sections A to C. Section A contained five (5) items that elicited information on the demographic characteristics of the participants. Section B of the MHPQ contained the Generalised Anxiety Disorder (GAD-7), which is a seven-item, self-report questionnaire. The GAD-7 was designed by Spitzer et al. (2006) to assess the individual's anxiety level during the previous two weeks. The items in the GAD-7 inquire about the degree to which the

individual has been bothered by feeling nervous, anxious or on edge, not being able to stop or control worrying, worrying too much about different things, having trouble relaxing, being restless that it is hard to sit still, becoming easily annoyed or irritable and feeling afraid as if something might happen. Scores of 0, 1, 2 and 3 are given for experiencing anxiety symptoms. These include 'not at all, for several days' (1 point), 'more than half the days' (2 points), and 'nearly every day (3 points), respectively. Participants were asked to indicate the frequency with which they had experienced each of the items on GAD-7 on a Likert-type scale ranging from 0 (not at all) to 3 (almost every day) over the past two weeks. The responses of participants to the items on the scale were added, with composite scores ranging from 0 to 21 for the GAD-7. When screening for anxiety, a recommended cut-off point of ≥ 10 is used for referral for further evaluation and treatment where necessary. Higher scores indicate greater severity of symptoms, suggesting the presence of anxiety. Section C of the MHPQ contained the Patient Health Questionnaire (PHQ-9). The PHQ-9 is a nine-item questionnaire that scores each of the nine DSM-IV criteria as '0' (not at all) to '3' (nearly every day). It assesses the severity of depression.

However, it can be used to make a diagnosis of depression in the at-risk population (e.g., students). The items in this questionnaire enquire about the degree to which the individual has been bothered by little interest or pleasure in doing things, feeling down, depressed, or hopeless, trouble falling or staying asleep, sleeping too much, feeling tired or having little energy, poor appetite or overeating, feeling bad about yourself – or that you are a failure or have let yourself or your family down, trouble concentrating on things, such as reading the newspaper or watching television, moving or speaking so slowly that other people could have noticed, or the opposite – being fidgety or restless that

you have been moving around a lot more than usual, and thoughts that you would be off dead, or of hurting yourself in some way. Participants were asked to indicate the frequency with which they had experienced each of the items on PHQ-9 on a Likert-type scale ranging from 0 (not at all) to 3 (nearly every day) over the past two weeks. The responses of participants to the items on the scale were added, with composite scores ranging from 0 to 27 for the PHQ-9. Higher scores indicated greater severity of symptoms, suggesting the presence of depression. The MHPPSQ contained 13 items, which were formulated based on the baseline findings of the study. The items were proposed strategies identified to prevent the onset of mental health problems among students. The copies of MHPPSQ were given to ten experts in Public Health Education, Department of Human Kinetics and Health Education, University of Nigeria, Nsukka, who helped to validate the proposed preventive strategies. The strategies were assigned a 4-point Likert-type response option of 'Very Appropriate (4 points),' 'Appropriate (3 points),' 'Inappropriate (2 points),' and 'Very Inappropriate (1 point). The experts were asked to place a tick (✓) in the columns against each of the proposed strategies as they deemed fit.

The face validity of the MHPQ was established by five experts in the Department of Human Kinetics and Health Education, University of Nigeria, Nsukka. Their criticisms and suggestions were used in producing the final version of the instrument. To determine the reliability coefficients (internal consistency) of the MHPQ, 20 copies of the instrument were administered to students of the University of Nigeria, Nsukka, Enugu State, Nigeria, which have similar characteristics with the study population. The reliability coefficients of the MHPQ were determined using Cronbach's alpha statistic because the items are assigned polytomous or Likert-type response options. In this study, the

reliability coefficients of 0.74 and 0.88 were obtained for sections B and C, respectively.

Method of data analysis: The retrieved copies of the MHPQ with the completeness of responses or data were analysed using the Statistical Package for the Social Sciences (IBM SPSS version 25) on an item-by-item basis. The point-biserial correlation was employed to determine the relationship between the level of anxiety, depression and sociodemographic characteristics of the students. Therefore, the point-biserial correlation was used to answer research questions one and two. The point-biserial correlation is used to assess the relationship between a dichotomous independent variable "X" and a continuous dependent variable "Y" that is measured on an interval or ratio scale (Chen & Popovich, 2011).

Subsequently, Nwagu and Agbaje's (2017) guidelines for the interpretation of the degree or strength of the relationship between two or more variables were employed. The guidelines recommended that a correlation coefficient of $\pm .00$ to $\pm .29$ should be interpreted as none to a weak relationship; correlation coefficients between $\pm .30$ to $\pm .59$ and $\pm .60$ to $\pm .99$ should be interpreted as moderate and strong relationships, respectively. In addition, a correlation coefficient of ± 1.00 should be interpreted as a perfect relationship between two or more variables. Mean and standard deviation were used to answer research question three. Multiple regression analyses were also used to test null hypotheses 1 and 2 at the 0.05 level of significance. A null hypothesis was rejected if the P-value is less than 0.05. However, when the P-value is greater than 0.05, the null hypothesis is not rejected.

Ethical considerations: The ethical approval for this study was obtained from the University of Nigeria Faculty of Education Research Ethics Committee (REC) (Approval Number: UNN/FE/REC23/047 dated January 24, 2023). This was presented to the Heads of

the Department of the sampled departments, seeking their permission to administer the instruments to their students. Also, a letter assuring the respondents of the confidentiality of their responses and the purpose of the study was attached to each copy of the instruments. The copies of the questionnaires were administered to the participants in their respective lecture halls by the researchers and

research assistants (five lecturers) who were briefed on the modalities of questionnaire administration. These lecturers did not need any special training since they had administered similar questionnaires to participants in other previously conducted studies. Copies of the completed questionnaires were collected on the spot after they had been filled out by the students.

Results

Table 1: Point-biserial Correlation Showing the Relationship between Anxiety Severity and Students' Perceived Contextual Stressors (n=390)

S/N	Variables	1.	2.	3.	4.	5.	6.
1.	Anxiety severity	1.00					
1.	Social/environment	.372	1.00				
2.	Perceived academic achievement	.254	.324	1.00			
3.	Curriculum/Expectations	.329	.423	.521	1.00		
4.	Time/Balance	.250	.394	.349	.510	1.00	
5.	Financial Stress	.368	.350	.301	.412	.401	1.00

Significant at $p < 0.05$.

Results in Table 1 showed that there was a positive moderate relationship between anxiety severity and students' social/environment (rbp = .37), curriculum/expectations (rbp = .32) and

financial stress (rbp = .36). Results also showed that there was a weak positive relationship between anxiety severity and students perceived academic achievement (rbp = .25) and time/balance challenge (rbp = .25).

Table 2: Point – Biserial Correlation showing the Relationship between Depression Severity level and Students' Perceived Contextual Stressors (n=390)

S/N	Variables	1.	2.	3.	4.	5.	6.
1.	Depression severity level	1.00					
1.	Social/environment	.324	1.00				
2.	Academic achievement	.172	.324	1.00			
3.	Curriculum/Expectations	.250	.423	.521	1.00		
4.	Time/Balance	.257	.349	.349	.510	1.00	
5.	Financial Stress	.331	.350	.301	.412	.000	1.00

Significant at $p < 0.05$.

Table 2 showed that there was a positive moderate relationship between depression severity and social/environment (rbp = .32) and financial stress (rbp = .33). Also, the

results showed that depression severity has a weak positive relationship with students perceived academic achievement (rbp = .17); curriculum/expectations (rbp = .25), and time/balance challenge (.25).

Table 3: Mean Responses of Experts on Preventive Strategies for Mental Health Problems among Undergraduate Students of Tertiary Institutions in FCT, Abuja (n = 10)

S/N	Items	$\bar{X}$	SD
1.	Organisation of school-based interventions by mental health educators and psychologists to identify students at high risk for anxiety and provide them with clinical support.	3.30	0.949
2.	Implementation of cognitive behavioural therapy (CBT) by mental health educators and psychologists. CBT helps in changing thinking and behavioural patterns, helping individuals to understand the problem, and develop a coping or treatment strategy with psychologists and other mental health experts.	3.50	0.850
3.	Organisation and implementation of workshops that train students in anxiety coping strategies and resilience skills by public health educators	3.20	0.919
4.	Implementation of programmes that isolate and mitigate risk factors or conditions (e.g., poor hostels, decay facilities) that may embarrass students, which further exacerbates their anxiety levels by the school management.	3.30	0.823
5.	Mental health education about anxiety by health educators to improve knowledge of risk factors for anxiety among students and how to avert such factors.	3.20	0.919
6.	Mental health interventions or programmes that mitigate social stigmatisation and potential dangers among depressed students need to be implemented by psychologists, sociologists and other mental health experts to enable them to seek prompt care	3.10	0.568
7.	Building specific pathways for mental health care and education targets stress-related factors that trigger depression in students by school authorities, psychologists, health educators and clinicians	3.30	0.483
8.	Building a supportive and serene environment to mitigate contextual factors that contribute to the onset of depressive symptoms in students, by school authorities and stakeholders in higher education	3.50	0.527
9.	Implementation of mental health screening programmes to identify students at high risk of depression by psychologists and clinicians for subsequent treatment.	3.70	0.483
10.	Implementation of mental health interventions by health educators, psychologists and public health experts that foster protective factors (e.g., social connectedness, self—esteem, social support and resilience) in the students and school environment to mitigate contextual stressors of anxiety.	3.50	0.527
11.	Stakeholders (university management, public health experts, mental health educators, psychologists and clinicians) develop and implement viable strategies that reduce academic-related challenges or stressors, financial stress, and improve economic assistance, opportunities and create an enabling school environment for students to prevent the onset of anxiety.	2.80	1.135
12.	Implementation of mental health interventions by health educators, psychologists and public health experts that foster protective factors (e.g., social connectedness, self—esteem, social support and resilience) in the students to mitigate contextual stressors of depression.	2.80	1.398
13.	Stakeholders (university management, public health experts, mental health educators, psychologists and clinicians) develop and implement viable strategies that reduce academic-related challenges or stressors, financial stress, and improve economic assistance, opportunities and create an enabling school environment for students to prevent the onset of depression.	2.50	1.179
14.	Grand Mean	3.21	0.346

Decision rule: $\bar{X} \geq 2.50$ = Appropriate Strategy; $\bar{X} < 2.50$ = Inappropriate Strategy

In Table 3, health experts considered the formulated preventive strategies for mental health problems among students of tertiary institutions appropriate ($\bar{X}$ = 3.21; SD = 0.35). Furthermore, preventive strategies such as the implementation of mental health screening programmes to identify students at high risk of depression by psychologists and clinicians for subsequent treatment ($\bar{X}$ = 3.70; SD = 0.48); building a supportive and serene environment to mitigate contextual factors that contribute to onset of depressive

symptoms in students by school authorities and stakeholders in higher education ($\bar{X}$ = 3.50; SD = 0.53); and implementation of mental health interventions by health educators, psychologists and public health experts that foster protective factors (e.g., social connectedness, self-esteem, social support and resilience) in the students and school environment to mitigate contextual stressors of anxiety ($\bar{X}$ = 3.50; SD = 0.53) were considered by health education experts as very appropriate.

Table 4: Summary of Multiple Regression Analysis Showing Contextual Factors as Predictors of Anxiety Level Severity among Tertiary Institution Students in FCT, Abuja (n = 390)

Model	R	R ²	AdjR ²	F	β	t	95% CI for B		
							P	LB	UB
(Constant)	0.218	0.048	0.208	21.491	- 5.293	0.000	1.915	4.180	
Social/Environment					0.228	4.378	0.000	0.601	1.581
Acad Achievement					0.053	0.993	0.321	0.240	0.730
Expectation					0.111	1.839	0.967	0.039	1.165
Time/Balance					0.003	0.056	0.955	0.533	0.565
Financial Stress				0.225	4.339	0.000	0.590	1.568	

Significant at P < 0.05

Note: β = Standard regression coefficients; F = ratio; R² = R square' Δ R² variance; Δ F = F-ratio change/variance; C. I= confidence interval; t – t-test value; LB = Lower Boundary for, μ B = Upper Boundary for B

Table 4 shows that social and physical environmental challenges and financial stress are positively and significantly correlated with the level of anxiety severity. The multiple regression model with all five predictors produced R² = .219, F (5,384) = 21.491, P< .001. The R² of .219 implies that the

full/entire model explained 21.9% (i.e., .219 x 100) of the total variance in the dependent variable (i.e., anxiety severity scores). In this model, social/physical environmental challenges with higher beta values (beta = 1.091, p = 0.001) and financial stress (beta = 1.079, P< .001) were statistically significant.

Table 5: Summary of Regression Analysis Showing Perceived Contextual Factors as Predictors of Depression Severity Level among Tertiary Institution Students in FCT, Abuja (n = 390)

Model	R	R ²	adj.R ²	F	95% CI for B				
					β	t	P	LB	UB
(Constant)	0.166	0.030	0.155	15.4236-	4.994	0.000	1.884	4.331	
Social/ Environment					0.205	3.810	0.000	0.496	1.555
Academic Achievement					-.005	0.099	0.921	-.551	0.498
Curriculum/ Expectation					0.070	1.235	0.218	-.221	0.966
Financial Stress					0.216	4.024	0.000	0.553	1.610
Significant at P < 0.05									

Table 5 shows that social and physical environmental challenges and financial stress are positively and significantly correlated with the level of depression severity. Also, the multiple regression model with all five predictors produced $R^2 = .166$; $F(5,384) = 15.236$, $P < .001$. The R^2 of .166 implies that the full model explained 16.6 per cent (i.e., $.166 \times 100$) of the total variance in the independent variable (i.e., depression severity scores). In this model, social/physical environmental challenges with higher beta values ($\beta = 1.026$, $p < .001$) and financial stress ($\beta = 1.081$, $P < .001$) were statistically significant.

Discussion

This study showed a positive moderate relationship between anxiety severity and students' social/environment, curriculum/expectations and financial stress. This finding supports the expectation that as social interactions among students and lecturers become more sophisticated or complicated, and the stress involved in the manipulation of the school environment increases, the level of anxiety severity also increases. The everyday stresses of tertiary institution life, peculiar to the cosmopolitan area such as FCT, Abuja, can

trigger symptomatology such as anxiety in those students with a predisposition (ACHA, 2014; NIMH, 2015), which supports the finding of this study. Studies in Nigeria also support this assertion that primary mental health services to address such issues remain scanty (Anyebe E.E. et al., 2020)

It did not come as a surprise that this study showed a positive moderate relationship between anxiety and students' financial stress. This finding supports what Derek et al. (2020) found in multivariate modelling that students' status was positively associated with financial anxiety. Students are frequently confronted with factors that Franquillo et al. (2016) described as economic recession, income decline and unimaginable debts, which are significantly associated with symptoms of anxiety. Administrators of tertiary institutions need to appreciate the conclusion by Mohammed and colleagues (2021) that students with financial support are associated with a lower prevalence risk of anxiety. It is pertinent, therefore, to increase and/or provide funding in all tertiary institutions dedicated to services which promote mental well-being and manage anxiety among students.

This study also showed that social/environmental challenges and financial

stress of undergraduate students positively and significantly correlated with their level of anxiety. Students who experienced social and institutional environment challenges and financial stress had higher anxiety severity scores, which were expected, probably due to factors identified by Hill and colleagues (2018) such as insufficient feedback, negative relations with faculty or staff and lack of peer support. Some studies have found associations between financial pressure and lack of social support with students' mental health problems (Beiter et al., 2015; Thompson et al., 2016; Richards et al., 2017; Richardson et al., 2017), which corroborates what this study found. As a typical Nigerian community, similar issues have been raised among students and in the community (Afolayan et al., 2018; Anyebe et al., 2017). There is, therefore, a need to promote social networks by facilitating social connections, such as routine contact with students, faculty and staff, to help identify students in distress (Jed Foundation Mental Health Action Map, 2011).

Results also showed a positive moderate relationship between depression severity and students' social/environmental and financial stress, respectively. This result was expected due to the mentally unfriendly tertiary institution environments in the study location. Linden and Jurdi-Hage (2017) in their study among students in Canada reported that social/environmental stress was the second-most influential predictor of the contextual stressors' variables for the depression model. It was expected that the highly stressful social and physical environment in FCT, Abuja, such as peer pressure to engage in drug abuse, illicit sex, examination malpractice and financial difficulties, would influence depression severity among students. Bronfenbrenner's (1994) ecological model, which conceives the individual, interpersonal and institutional level factors within an existing system to explain human behaviour, supports these results. The impact on students' interpersonal (social domain), such

as success and satisfaction with social interactions, and the institutional (environment) level, such as institution setting and overall climate of tertiary institutions, is significant on the students' level of depression. This implies that tertiary institution leaders should understand that campuses can be instrumental in the prevention and early treatment of mental health problems, including depression. These issues can be prevented and mitigated by assessing the mental health services on campuses, identifying gaps, and enhancing the accessibility of clinical services.

This study's results further showed a weak positive relationship between students' perceived academic achievement, curriculum/expectations, and time/balance challenge, respectively. This came as a surprise for students in FCT, Abuja, because the expression of academic self-confidence among students is identified as a significant predictor of depression, in addition to being a major source of stress for students of tertiary institutions. Academic pressure and the pressure to succeed among students positively correlate with levels of depression (Beiter et al., 2015). There is a need for the management of tertiary institutions to identify and maintain factors that presently mitigate against students' perceived academic achievement, curriculum/expectations and time/balance, which could include flexibility in academic schedules/timetables. Time/balance was an influential predictor in this study because students constantly face time management challenges both on-campus and off-campus, such as academic work, social engagements, and relationships with friends and family. Adjusting to the tertiary institution environment can be exceedingly stressful for students, suggesting that they might have struggled with perceived school environment stressors and co-curricular activities.

This study also showed that students' social and environmental challenges and financial stress were positively and significantly

correlated with students' level of depression severity. This indicated that students' interpersonal and financial challenges tended to produce higher depression severity scores. This was expected due to students' challenges of meeting new friends, adjusting to the campus environment in a challenging cosmopolitan centre like FCT, Abuja, and financial pressure/difficulties due to increasing inflation and the high cost of schooling. The management of tertiary institutions can tackle the financial difficulties of their students by increasing and/or providing funding dedicated to services which promote and support their mental health and well-being. Tertiary institutions can save money by providing mental health and emotional health support for their students. For example, Eisenberg and colleagues (2014) estimated that delivering treatment to 100 depressed students in a single school year in the United States could result in 6 averted dropouts and an average of \$240,000 in additional tuition dollars.

Findings in this study on expert opinions on preventive strategies such as mental health screening programmes, supportive environment and specific mental health interventions by qualified personnel, are established components of school mental health programmes. (Alinejad-Tilaki, et al., 2025). These preventive strategies, as identified in this study, cut across multidisciplinary professions, as similarly identified by Colizzi et al. (2020). The preventive measures should be a core aspect of the overall school health programmes, and stimulate targeted health initiatives in tertiary institutions in FCT Abuja

Conclusion

This study has identified contextual factors related to the mental health needs of students of higher institutions in the setting. The broad elements of environment, academic and curricular demands, high expectations, and the ever-present financial stress constitute key

contextual factors. Contextual Factors predict mental health problems, particularly anxiety and depression, among tertiary institution students in the setting. Preventive measures elicited included the need for mental screening services in tertiary institutions for early detection of mental health issues among students, in addition to a supportive school environment where targeted interventions can also be delivered.

Recommendations

Based on this study's findings, health experts, as first-line responders, need to familiarise themselves with the many ways that mental health issues such as anxiety can manifest in students, identify students at high risk and organise and implement preventive strategies such as providing a mental health-friendly school environment and clinical services, including cognitive behaviour therapy (CBT). There is also a need to adopt the prevention, promotion and early intervention approach to risk factors identification while building life skills in students, such as time management, basic health and nutrition, and a sleep schedule. In addition, administrators of tertiary institutions should deliberately adopt student mental health and well-being as an issue of priority by providing funding dedicated to services which promote and support the mental health of students, since young people manifest symptoms of mental health problems by the age of 24. There is a need for administrators to improve the physical environment and opportunities for social interaction among students, such as connecting with students to increase educator immediacy and the perception of relational closeness, which makes students more comfortable in class and more willing to engage with the health educator. Mental health professionals and health educators need to promote social networks by facilitating social connections such as routine contact with students, faculty and staff to help identify students in distress and build trust and empathy with their students, including

allowing them to choose working groups depending on the course content to lessen their mental distress.

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