

# Academic Stress and Mental Health Status Among Undergraduate Nursing Students in Bowen University Teaching Hospital

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## Abstract:

### ➤ Introduction

The transition from high school to college is a significant milestone in many individuals' lives, marked by newfound freedoms, academic pursuits, and opportunities for personal growth. However, this transition is often accompanied by heightened levels of academic stress among.

### ➤ Aim

This study assessed the level of academic stress, its causes, and the relationship between academic stress and mental health among nursing students at Bowen University Teaching Hospital, with a view to understanding the impact of stress on students' well-being and identifying key stressors.

### ➤ Methods

A descriptive cross-sectional study design was adopted, with a sample of 217 nursing students selected using stratified random sampling. Data were collected using a self-developed, semi-structured questionnaire and analyzed using the Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics were used to summarize the data. At the same time, Pearson correlation and ANOVA were employed to test the relationship between academic stress and mental health and examine differences in stress levels across various sources of academic stress.

### ➤ Results

The results showed that most students (86.2%) experienced moderate levels of academic stress. Key stressors identified included examinations (89.4%), increased class workload (88.0%), and many hours of study (87.6%). Roughly half of respondents reported poor mental health, with a significant negative correlation between academic stress and mental health ( $p = 0.005$ ). Additionally, significant differences in stress levels were found for factors such as practical work ( $p = 0.012$ ) and inadequate break time ( $p = 0.002$ ).

### ➤ Conclusion

Academic stress was found to negatively affect the mental health of nursing students, highlighting the need for mental health support and curriculum adjustments to reduce stress. It is recommended that nursing schools implement regular mental health assessments, offer stress management training, and revise academic workloads to promote students' well-being.

**Keywords:** Academic Stress, Nursing Students, Mental Health, Workload, Clinical Practice, Stressors.

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## I. INTRODUCTION

Nursing education is inherently demanding, characterized by rigorous academic workloads, clinical rotations, and high-stakes examinations, which often precipitate elevated stress levels among undergraduate students [1]. Academic stress refers to the negative psychological response experienced by learners when educational demands and expectations are perceived as greater than their available resources to cope [2]. It manifests in symptoms such as anxiety, depression, and burnout, compromising mental health and academic performance [3]. In low- and middle-income countries like Nigeria, these challenges are exacerbated by resource constraints, cultural expectations, and limited mental health support in healthcare training institutions [4].

Despite growing evidence linking academic stress to adverse mental health outcomes, such as over 40% prevalence of moderate-to-severe anxiety among nursing students globally [5]. Context-specific data from Nigerian teaching hospitals remain scarce. Undergraduate nursing students at Bowen University Teaching Hospital (BUTH), a key training hub in southwestern Nigeria, face unique stressors, including overcrowded clinical placements and faculty shortages, yet no studies have examined their stress profiles and mental health status. The study aimed at assessing the level of academic stress among undergraduate nursing students at Bowen University Teaching Hospital, identifying the major sources of that stress, and determining their mental health status. It also examined the relationship between academic stress and mental health.

This study is justified by the increasing academic and clinical demands placed on undergraduate nursing students, which make them vulnerable to stress and poor mental health outcomes [6,7]. Nursing education is particularly demanding because students must cope with coursework, examinations, clinical practice, and interpersonal challenges at the same time, and these pressures may negatively affect concentration, academic performance, and psychological well-being [8,9].

Academic stress has been shown to contribute to anxiety, depression, and other mental health problems among undergraduate students, including nursing students [10,11]. Recent evidence also shows that a considerable proportion of nursing students experience moderate to severe stress, with workload, examinations, clinical placement, and financial constraints identified as common sources [10,12]. This suggests that the problem is not only real but also relevant to the local educational context.

The study is further justified because most available studies have focused on stress in general or on specific outcomes such as anxiety or depression, rather than assessing broader mental health status alongside academic stress [11,13,14]. In addition, there is limited context-specific evidence from Bowen University Teaching Hospital, making it difficult for administrators and lecturers to design targeted

support measures based on local data [15,16]. Generating evidence from this setting will therefore fill an important gap in the literature.

Findings from the study may help nursing educators, school administrators, and policy makers develop strategies such as counseling services, stress-management programmes, mentoring, and workload adjustments to improve students' mental health and academic success [17,18]. The study is also important because nursing students' well-being today may influence the quality of the future nursing workforce and patient care.

## II. METHODS

### ➤ *Research Design*

The study employed a cross-sectional descriptive design to assess academic stress, its causes, and mental health status among undergraduate nursing students in Bowen University Teaching Hospital, Ogbomoso.

### ➤ *Study Settings*

The study setting was Bowen University Teaching Hospital (BUTH), a private tertiary health institution owned by the Nigerian Baptist Convention. It is used as a clinical training site for students from Bowen University and the College of Nursing, BUTH.

### ➤ *Target Population:*

The target population comprised nursing students in Bowen University Teaching Hospital. 300-, 400-, and 500-level nursing students in the Faculty of Nursing, Bowen University, as well as year 2 and year 3 students in the College of Nursing, BUTH.

### ➤ *Inclusion Criteria*

- 300 – 500 level Bachelor of Nursing Science (BNSc) students of enrolled in Bowen University during the study period.
- Year 2 and year 3 students nurses enrolled in the College of Nursing (CON), BUTH during the study period.
- Students in the above levels have experienced both classroom and clinical training.
- Students who are available at the time of data collection.
- Students who give written informed consent to participate.

### ➤ *Exclusion Criteria*

- Undergraduate nursing students who are on leave of absence, deferment, or internship break during data collection.
- Students who are severely ill, hospitalized, or psychologically distressed to the extent that they cannot complete the questionnaire safely.
- Students who decline consent.
- Students who have not yet started meaningful academic or clinical exposure (year one and year two BNSc students, and year one CON students).

➤ *Sample Size*

The sample size was determined using Cochran's formula at a 95% confidence level and an estimated prevalence of 85%, yielding a minimum sample size of 196 respondents. After adjusting for a 10% non-response rate, the final sample size was 217. Stratified random sampling was used to ensure representation across academic levels, while convenience sampling was applied within strata to recruit respondents from the two institutions.

➤ *Sampling Technique*

Data were collected using a structured questionnaire with four sections: socio-demographic characteristics, level of academic stress, causes of academic stress, and mental health status. The instrument consisted of dichotomous and multiple-choice items. Face validity was ensured through expert review, and reliability testing was conducted to confirm the consistency of the instrument.

➤ *Instrument for Data Collection*

The Academic Stress Scale (ASS) was originally developed by Kim in 1970 and was standardized by Rajendran and Kalippan in 1990 [19]. The scale consisted of 40 items that measured the students' perceived academic stressors [20]. Each item has five alternative responses. The scale was rated from 1 point for no stress, 2 points for slight stress, 3 points for moderate stress, 4 points for high stress, and 5 points for extreme stress.

The total score ranges from 0 to 40, with a higher score indicating higher academic stress.

Mental well-being was assessed with the 14-item Warwick-Edinburgh Mental Well-Being Scale, which scores from 14 to 70 by summing responses on a 5-point scale over the previous two weeks. Scores were then grouped into poor (14–40), average/adequate (41–59), and good (60–70) mental well-being based on adapted normative benchmarks [21,22].

➤ *Validity and Reliability of the Instrument*

The psychometric properties of the instrument have been investigated by the developers. The validated 40-item ASS has high internal consistency and adequate construct and concurrent validity. Validity is correlated to biological, cognitive, psychosocial, emotional, and behavioral factors. The Cronbach's alpha was 0.813 and 0.882. The scale was used in its original version.

➤ *Data Collection Methods*

An official permission to collect data was secured from the university management. Also, all the school representatives were approached before the data was collected. The purpose and importance of the study was explained to the eligible respondents. Eligible nursing students who consented to participate in the study were given the research questionnaire to fill. The filled questionnaires were collected immediately to

prevent loss. Efforts were made to avoid duplication of respondent as proper documentation were to be taken to ensure that guidelines and ethical clearance were adhered to during the selection of participants in this study.

### III. DATA ANALYSIS

Data were analyzed using SPSS with both descriptive and inferential statistics. Frequency counts and percentages were used to summarize variables, while the Pearson chi-square was used to test relationships between variables and hypotheses. Academic stress levels were classified into slight, moderate, high, and extreme categories based on total scores. Causes of stress were assessed using a yes/no response format, and mental health status was measured using 18 items scored on a five-point scale (0 to 4), with higher scores indicating better mental well-being.

➤ *Ethical Considerations*

Ethical approval was obtained from the Health Research Ethics Committee (HREC) of Bowen University Teaching Hospital, Ogbomoso. Administrative permits were secured from the Chief Medical Directors and Heads of Administration of each participating hospital to ensure institutional compliance and support for the research activities. Before data collection, researchers obtained verbal consent from primary care providers and staff members responsible for diabetic clinics at each facility after giving them an explanation of what the study was about to ensure their understanding and cooperation.

All participants provided informed consent before enrollment in the study to ensure voluntary participation. Strict confidentiality protocols were implemented throughout the study, and participants' anonymity was ensured. All collected data was accessible only to the principal researcher and handled in accordance with ethical guidelines for health research, ensuring that participant information remained secure and was used solely for the stated research purposes.

### IV. RESULTS

The findings showed that academic stress was common among the students. Most (86.2%) of the respondents reported moderate stress, based on their mean stress scores. A smaller proportion experienced low stress (10.6%), while only 3.2% were classified as having high stress. In terms of specific stressors, examinations were the most frequently reported cause of stress (89.4%), followed by increased class workload (88.0%), many hours of study (87.6%), and leaving assignments until the last minute (87.1%).

At the item level, worrying about examinations was reported as an extreme stressor by 62.7% of the students, difficulty remembering what was studied was rated as a high stressor by 66.8%, and lack of self-confidence was identified as a moderate to extreme source of stress by 70.5% of respondents.

Table 1: Causes of Academic Stress as Perceived by the Nursing Students

	<b>Yes</b>	<b>No</b>
Tedious practical work	182 83.9%	35 16.1%
Increased class workload	191 88.0%	26 12.0%
Examinations	194 89.4%	23 10.6%
Many hours of studies	190 87.6%	27 12.4%
Staying late writing paper	187 86.2%	30 13.8%
Less vacations/break	171 78.8%	46 21.2%
Overburden with study	173 79.7%	44 20.3%
Struggling to meet your own academic standards	169 77.9%	48 22.1%
Lower grades than you hoped for	162 74.7%	55 25.3%
Too many things at once	170 78.3%	47 21.7%
Leaving assignments to last minute	189 87.1%	28 12.9%
Heavy demands for extracellular activities	193 88.9%	24 11.1%
Conflicts with lecturer	177 81.6%	40 18.4%

Table 1 shows that the major causes of academic stress include examinations (89.4%), increased class workload (88.0%), and many hours of study (87.6%). A significant proportion (87.1%) also experienced stress from leaving assignments until the last minute.

Table 2: Overall Stress Levels Among Nursing Students (Categorized by Mean Stress Scores)

	<b>LOW</b>	<b>MODERATE</b>	<b>HIGH</b>
Level of stress	23	187	7

Table 2 categorizes nursing students' stress levels based on their mean stress scores, dividing them into low, moderate, and high stress groups. The majority of students (86.2%) fall into the moderate stress category, indicating that their mean stress scores were above average but not extreme. A smaller proportion (10.6%) experienced low stress, with scores below the mean threshold. Only 3.2% of students were classified as having high stress, with mean scores significantly above the average. This categorization reflects the overall stress distribution, highlighting that most students experience moderate levels of stress but a few face heightened academic pressures.

Table 3: Mean Scores of Mental Health Status of Nursing Students

	<b>Poor</b>	<b>Good</b>
Mental Health Status	102	115

In relation to mental health, 62.7% of the students reported feeling optimistic about the future all the time, 53.9% said they felt depressed rarely, and 72.8% indicated that they did not feel anxious most of the time. Overall, 53% of the respondents were classified as having good mental health based on their mean mental health scores, while 47% were categorized as having poor mental health (Table 3)

Table 4: Relationship Between Level of Academic Stress and Mental Health Status

		Mental Health State	
		Poor	Good
Level of stress	LOW	7	16
	MODERATE	92	95
	HIGH	3	4
At .001 level		Pearson -.189 Sig .005 217	

Table 4 showed a significant inverse relationship between academic stress and mental health. The Pearson correlation coefficient was  $-0.189$ , with a  $p$ -value of  $0.005$ . This means that as academic stress increased, mental health status tended to decline. Students with higher stress levels were more likely to report poorer mental health outcomes, while those with lower stress had relatively better mental health.

Table 5: Differences in Academic Stress Levels Across Sources of Stress

Factors	Sum of Squares (Between Groups)	df (Between Groups)	Mean Square (Between Groups)	F	P value
Tedious practical work	9.518	49	0.194	1.635	0.012
Increased class workload	5.086	49	0.104	0.974	0.529
Examinations	5.963	49	0.122	1.392	0.064
Many hours of studies	7.559	49	0.154	1.602	0.015
Staying late writing paper	6.677	49	0.136	1.187	0.213
Less vacations/break	12.861	49	0.262	1.874	0.002
Overburden with study	11.79	49	0.241	1.725	0.006
Struggling to meet academic standards	12.443	49	0.254	1.7	0.007
Lower grades than hoped for	12.529	49	0.256	1.497	0.032
Too many things at once	13.913	49	0.284	2.07	0.000
Leaving assignments to last minute	5.032	49	0.103	0.886	0.683
Heavy demands for extracurricular activities	5.629	49	0.115	1.221	0.178
Conflicts with lecturer	11.966	49	0.244	1.974	0.001

In table 5, ANOVA results show that academic stress levels differed significantly across several sources of stress among nursing students. Tedious practical work was significant ( $F = 1.635, p = 0.012$ ), many hours of study ( $F = 1.602, p = 0.015$ ), fewer vacations or breaks ( $F = 1.874, p = 0.002$ ), overburden with study ( $F = 1.725, p = 0.006$ ), struggling to meet academic standards and ( $F = 1.7, p = 0.007$ ), too many things at once ( $F = 2.07, p = 0.000$ ), conflicts with lecturers ( $F = 1.974, p = 0.001$ ).

Table 6: Differences in Mental Health Status Across Sources of Academic Stress

Factor	Sum of Squares (Between Groups)	df (Between Groups)	Mean Square (Between Groups)	F	P value
Tedious practical work	8.263	30	0.275	2.429	0.000
Increased class workload	4.244	30	0.141	1.412	0.088
Examinations	3.415	30	0.114	1.235	0.2
Many hours of studies	5.554	30	0.185	1.904	0.005
Staying late writing paper	6.95	30	0.232	2.28	0.0
Less vacations/break	9.6	30	0.32	2.233	0.001
Overburden with study	7.19	30	0.24	1.598	0.033
Struggling to meet academic standards	8.269	30	0.276	1.761	0.013
Lower grades than hoped for	11.72	30	0.391	2.477	0.0
Too many things at once	10.309	30	0.344	2.411	0.0
Leaving assignments to last minute	5.652	30	0.188	1.871	0.007
Heavy demands for extracurricular activities	3.677	30	0.123	1.29	0.157
Conflicts with the lecturer	7.237	30	0.241	1.767	0.012

Table 6 shows significant differences in mental health status across several sources of stress. Tedious practical work was significant ( $F = 2.429, p = 0.000$ ), many hours of study ( $F = 1.904, p = 0.005$ ), fewer vacations or breaks ( $F = 2.233, p = 0.001$ ), overburden with study ( $F = 1.598, p = 0.033$ ), struggling to meet academic standards ( $F = 1.761, p = 0.013$ ), lower grades than hoped for ( $F = 2.477, p = 0.000$ ), too many things at once ( $F = 2.411, p = 0.000$ ), and conflicts with lecturers ( $F = 1.974, p = 0.001$ ).

## V. DISCUSSION

The findings show that academic stress is a major challenge for nursing students in Bowen University Teaching Hospital, and this is consistent with recent literature that describes nursing education as both academically and clinically demanding [23,24,25]. The high proportion (86.2%) of students in the moderate stress category suggests that stress is common in this population. However, it may still be manageable for many students if appropriate coping supports are available. This pattern is similar to reports from other nursing student populations where moderate stress was the dominant category, especially where coursework, examinations, and clinical exposure overlap [26,27,28].

### ➤ *Academic Stress Levels*

The predominance of moderate stress may reflect the nature of nursing training itself, which requires students to balance theory, practical assignments, and clinical duties. This agrees with findings from earlier studies showing that academic and clinical responsibilities are common stressors in nursing education [12,23]. The low proportion of students with high stress (3.2%) may indicate that although the workload is heavy, many students are still coping, possibly through adaptation, peer support, or resilience. However, this does not reduce the concern because even moderate stress can affect learning, concentration, and emotional stability over time.

### ➤ *Major Stressors*

The major sources of academic stress in this study were examinations, increased workload, long hours of study, and late completion of assignments. This pattern agrees with earlier studies showing that assessment pressure and workload are among the most persistent stressors in nursing education [12,23]. The prominence of examinations as a stressor may reflect the competitive and content-heavy nature of nursing curricula, in which students are expected to master large volumes of theory while also demonstrating clinical competence. Similarly, the burden of long study hours and multiple assignments indicates that the academic demands placed on students are both continuous and intensive. The high proportions reporting workload and long hours of study also mirror studies showing that dense curricula and limited time are among the most consistent stress triggers in nursing education [29]. Tedious practical work and limited vacation or break time were also important contributors to stress. This finding is important because it shows that the source of stress is not only

academic theory but also clinical practice and insufficient recovery time. Similar results have been reported in studies where clinical placement, patient care, and teacher-related pressures were major stressors for nursing students [23]. In practical terms, this means that reducing academic stress will require both classroom-based and clinical-level interventions.

### ➤ *Mental Health Status*

The mental health results show a nearly even split between good and poor mental health, with 52.9% classified as good and 47.1% as poor. This suggests that although a slight majority of students are coping well, a substantial minority are experiencing psychological strain. The item-level responses strengthen this interpretation, since many students reported feelings of depression and anxiety at least some of the time. Previous literature has shown that nursing students are vulnerable to anxiety, depressive symptoms, and emotional exhaustion, especially when academic and clinical pressures accumulate [11,25]. The current findings, therefore, reinforce the need to treat student mental health as a major educational concern rather than a peripheral issue.

The presence of almost half the sample in the poor mental health category is particularly important because it signals a risk group that may require support. Similar studies have shown that nursing students' mental health is closely linked to stress exposure, and that emotional exhaustion, anxiety, and depressive symptoms often increase when workload and clinical responsibilities intensify [30,31,32]. In this study, the pattern suggests that mental health support should be built into nursing education rather than treated as an optional service.

### ➤ *Relationship Between Stress and Mental Health*

The significant inverse relationship between academic stress and mental health ( $r = -0.189, p = 0.005$ ) is one of the most important findings. It means that as academic stress increases, mental health worsens. This is consistent with broader literature showing that workload, examination pressure, and clinical demands are associated with anxiety, emotional exhaustion, and reduced psychological well-being in both students and health professionals [33]. The finding also supports the view that stress is not only an academic issue but also a mental health concern.

This result is especially relevant because nursing students are future healthcare providers, and persistent psychological distress during training may affect both learning and later professional functioning. Similar studies have reported that stress is associated with poorer academic performance, weaker concentration, reduced motivation, and unhealthy coping behaviors among nursing students [29]. The current study, therefore, adds local evidence supporting the need for proactive mental health interventions in nursing education.

➤ *Differences by Stress Source*

The ANOVA findings showed significant differences in both mental health status and academic stress levels across several sources of stress. Tedious practical work, staying late writing papers, lower grades than expected, and having too many tasks at once were associated with differences in mental health outcomes. This suggests that not all stressors affect students equally; some have a stronger emotional impact than others. Similar patterns have been reported in studies where workload, practical placement, and teacher-related stress were the strongest predictors of poor student outcomes [8,23,29]. The significant differences in stress levels linked to tedious practical work, many hours of study, fewer vacations, overburdened study schedules, and conflicts with lecturers indicate that both academic structure and interpersonal climate matter. This finding agrees with literature showing that stress in nursing students is shaped by both task demands and relationships with educators and supervisors [23,34]. Conflicts with lecturers are particularly important because they can intensify anxiety, lower confidence, and reduce students' willingness to seek help.

## VI. IMPLICATIONS

The findings have several implications for nursing education and student support services. First, the high level of moderate stress suggests a need for regular stress screening, counseling, and time-management support for nursing students. Second, because examinations and workload were the major stressors, curriculum planners should review assessment schedules, distribute assignments more evenly, and avoid clustering deadlines. Third, the role of practical work and lecturer conflict shows that clinical supervisors and academic staff should be trained to provide supportive rather than punitive learning environments.

The near-equal split between good and poor mental health also means that mental health promotion should be integrated into nursing training. This could include peer support groups, mentorship programs, relaxation training, and easy referral pathways for psychological care. The significant inverse relationship between stress and mental health makes it clear that reducing academic stress is likely to improve student well-being. In the long term, this may also improve retention, academic performance, clinical competence, and the quality of the nursing workforce.

## VII. CONCLUSION

Overall, the findings indicate that nursing students in the study area are exposed to substantial academic pressure, which is closely tied to mental health outcomes, driven especially by examinations, workload, and practical demands. Their mental health is mixed, with many coping well but a substantial proportion showing poor outcomes. The significant negative relationship between stress and mental health confirms that academic pressure is an important determinant of psychological well-being in this population.

## RECOMMENDATIONS

The recommendations focus on strengthening support systems for nursing students and reducing avoidable stressors. Nursing schools should provide counseling services, ease academic overload, improve clinical learning environments, and teach time management and stress-coping skills. They should also monitor stress regularly so support can be offered early.

## STRENGTHS AND LIMITATIONS

The strength of this study lies in its focus on a relevant and underexplored issue among undergraduate nursing students, a population known to experience high levels of academic stress that may negatively affect mental health and academic functioning. In addition, the study provides context-specific evidence from Bowen University Teaching Hospital that may inform student support services and mental health interventions. However, the study is limited by reliance on self-reported data and a likely cross-sectional design, which limits causal inference. Its findings may also have limited generalizability beyond the study setting, and other confounding factors, such as financial and family stressors, may influence mental health outcomes.

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➤ *Conflict of Interests*

The authors declared no potential conflict of interest.

➤ *Consent for Publication*

Not applicable

➤ *Data Availability Statement*

The data that support the findings of this study are available from the corresponding author upon request.

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This study was not funded.

➤ *Authors' Contributions*

All authors were involved in the conception of the research idea, design and implementation of the project. Data collection and data entry were done by FOO. CCHO and FOO carried out the statistical analysis and interpretation of data. CCHO wrote the manuscript, and arranged to journal specifications. All authors read and approved the final manuscripts and this submission.

➤ *Ethics Approval and Consent to Participate*

Ethical approval was obtained from the Bowen University Teaching Hospital Ethics and Research Committee. Nursing students received comprehensive briefings on the study's purpose, and oral informed consent was secured before participation. All ethical principles were upheld, including anonymity, confidentiality (encrypted NVivo storage), voluntary participation, and the right to withdraw without penalty at any stage. Equal treatment and privacy were maintained throughout, in accordance with the Declaration of Helsinki.

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