

## INFLUENCE OF STRESS ON ACADEMIC ACHIEVEMENT AMONG UNDERGRADUATES OF FEDERAL UNIVERSITY DUTSIN-MA, KATSINA STATE, NIGERIA

**BELLO ADO BELLO**

Department of Educational Psychology and Counselling,  
Federal University Dutsin-Ma.  
bbello@fudutsinma.edu.ng

### Abstracts

The study examined influence of stress on academic achievement among undergraduates of Federal University Dutsin-Ma, Katsina State, Nigeria. Two research objectives, one research question and one hypothesis were formulated to guide the study. An ex-post facto research design was employed for the study. From a population of 7,670 students, a sample of 365 was selected using a Research Advisor sampling table. Data was collected using an adopted version of Perceived Stress Scale (PSS) and students' Cumulative Grade Point Average (CGPA) as a measure of academic achievement. Instrument reliability, confirmed through a pilot test with 40 students, yielded a reliability index of 0.77. Descriptive statistics was used to answer the research question, while ANOVA was used to test the hypotheses. Findings showed that 56.2% of students experienced high levels stress. Also, significant difference in academic achievement was observed among students with low, moderate, and high stress levels. The study recommends that educators enhance awareness of the effects of stress on students' academic outcomes. It further suggests that academic schedules be structured to provide sufficient intervals between assessments and examinations.

**Keywords:** Influence, Stress, Academic Achievement, Undergraduate Students

### Introduction

Academic performance is a key indicator used to determine students' success or failure in the educational system, as well as their placement into various academic programs and career paths. Academic performance is a critical concern among students in higher education and is commonly measured using the Grade Point Average (GPA). Despite living in a modern era where access to education is widely available, variations in students' academic performance persist (Ishaya et al., 2019).

Scholars and researchers have consistently attempted to identify the major determinants of individual academic success. Several factors have been extensively examined as potential predictors of academic performance, including intelligence quotient (IQ), gender, motivation, socioeconomic status, family background, and personality traits, among others. (Abdurrahman, 2015).

Psychological problems such as stress, anxiety, and depression exacerbate the pressure on students to perform better, thereby contributing to poor academic performance. Stress is described by psychologists as an undesirable and unpleasant situation that places demands on an individual, thereby distorting physical, psychological, emotional, and cognitive wellbeing, and is caused by various activities, events, and life experiences (Okorie, 2016).

Stress is an unavoidable part of the normal fabrics of human existence. Stress can be defined as the individual's response to changes and external threats resulting in symptoms such as anxiety, tension, and the inability to focus. Psychological stress occurs when people feel that the requirements of the situation that they are facing exceed their capabilities, which hinders their ability to deal with them. Consequently, they realize that they are unable to balance the requirements of the situation and their ability to respond to it, which leads to a feeling of dominance of stress on them (Alzukhari & Gallo, 2023). The researcher observed that many university students face numerous stressful situations, including making decisions about their academic, social, and leisure activities, as well as coping with parental expectations, information overload, and increasing academic pressure.

In a study conducted by Ishaya, Abubakar, Shekwolo and Temidayo (2019) on influence of stress on academic performance in Nasarawa State University Keffi, Nigeria. The population of the study consists of all undergraduate students of the University. The sample of the study is 210 undergraduate students selected using convenient sampling technique from seven Faculties. The research adopted a standardized instrument on Academic stress called Perceived Stress Scale. Pearson Moment Correlation and Independent Sample t-test were used to test the hypotheses. The findings of the study revealed statistically significant relationship, with an indication of a positive relationship between students' academic stress and academic performance. The study therefore concluded that academic stress has a great influence on students' academic performance. It was recommended that government should implement policies that help school management. Also, that parents and student to discover the hiding factors that are responsible for the poor academic performance in the schools.

In another study, Oyewobi, Bolarin, Oladosu and Jimoh (2020) conducted a study on the influence of stress and coping strategies on undergraduate students performance in federal University Minna, Nigeria. The population of the study consist of all undergraduate students from the department of quantity surveying from 100-500 level. The sample size of 251 was drawn from the population. A student stress scale was used to elicit response for the study. The findings revealed that a significant linear associations have been established between all the proposed paths and the outcome factor. Similarly, the findings have shown that the stress faced by students is an optimal degree of stress that improves learning.

Similarly, Herath (2019) embarked on a study to find out the Relationship between Academic Stress and Academic Achievements of the Undergraduate Students in Sri Lanka. The population of the study consist of all undergraduate students of the Uva Wellasa University. To conduct the research, 256 students from three Faculties were selected as sample of the study. Academic stress questionnaire was distributed among the participants to assess the students' academic stress, academic achievements and general demographic information. The findings of the study revealed that they are significant correlation between stress and academic success. The researcher draws the attention of students, administrators as well as academics regarding the importance of maintaining a balance between the academic career and the students' life for better learning. He also recommended that the universities need to provide an understanding of stress and stress management strategies to students so as to develop a healthy body and mind and to enhance students' academic achievement.

More so, Olape, Lasiele, Chiaka and Abidoye (2017) conducted a study to examine the relationship between level of stress and students' academic performance in Universities in Kwara State, Nigeria. The population of the study consist of all universities in Kwara State. Proportional stratified random sampling was used to select 300 students for the study. A "Students' Stress Level Questionnaire (SSLQ)" and "Students' Academic Performance proforma" was used to collect data. The findings

were that a significant relationship exists between the stress level and academic performance of the students. There is also a significant relationship between level of personal stress, interpersonal stress, environmental stress, achievement stress and academic performance. Therefore, it was recommended that the universities organize stress management seminars and workshops in collaboration with the Counselling and Human Development department. It is also recommended that university administrators make the learning environment conducive to boost academic performance and reduce stress.

Also, Siraj, Salam, Roslan, Hassan and Othman (2014) investigated stress and its association with the academic performance of undergraduate fourth year medical students at Universiti Kebangsaan Malaysia. The population of the study consists of 234 level 4 medical students of Universiti Kebangsaan Malaysia. The Sample size comprised of 179 students after fulfilling all inclusion and exclusion criteria. A validated Medical Students' Stressor Questionnaire (MSSQ) was used to collect the data. Stress level and its association with CGPA of semester-1 examination were analyzed. The study revealed that respondents with a high and severe stress level were observed to have higher CGPA.

Similarly, Abiodun and Oluwole, (2020) conducted a study on the prevalence and predictors of stress among undergraduates in Nigerian University. The study, which surveyed 300 undergraduate students in a Nigerian university, found that academic stress was the most common source of stress among the students and the prevalence of stress among undergraduate students in Nigeria was found to be 82.5%.

### **Statement of the Problem**

The issue of poor academic performance among undergraduate students has become a growing concern in many universities. At Federal University Dutsin-Ma, the researcher observed a persistent decline in the academic achievement of students, particularly those in the 100 and 200 levels.

For instance, in the Department of Special Education, only 54 out of 184 registered students passed without carryovers in the 2020/2021 academic session, while 130 students had carryovers. Similarly, only 14 out of 100 students passed in the 2018/2019 session, and 32 out of 95 students passed in the 2017/2018 session. A similar pattern is evident in the Department of Applied Chemistry. In the 2019/2020 academic session, only 34 out of 124 examined students passed without carryovers, while 97 students had carryovers. In the 2018/2019 session, 32 out of 74 students passed, leaving 42 students with carryovers, while in the 2020/2021 session, only 51 out of 117 students passed without carryovers. Likewise, in the Department of Science Education, only 74 out of 179 students passed without carryovers in the 2020/2021 session, while in the 2019/2020 session, 86 out of 194 students passed and 108 students had carryovers (Examination Office, FUDMA, 2022).

These statistics suggest that despite efforts to improve teaching and learning in the university, poor academic performance among students remains prevalent. Several factors may contribute to this situation, including stress, anxiety, and socioeconomic challenges. However, to the best of the researcher's knowledge, there is limited empirical evidence on the influence of stress on the academic achievement of undergraduate students at Federal University Dutsin-Ma, Katsina State. This gap therefore necessitates the present study.

### **Objectives of the Study**

The study sought to achieve the following objectives.

1. To determine the levels of stress among undergraduates of Federal University Dutsin-Ma, Katsina State.

2. To determine the differences in academic achievement among undergraduates of Federal University Dutsin-Ma, Katsina State with low, moderate and high stress.

### Research Question

What are the levels of stress among undergraduates of Federal University Dutsin-Ma, Katsina State?

### Research Hypothesis

Ho1: There is no significant difference in academic achievement among undergraduates of Federal University Dutsin-Ma, Katsina State with low, moderate and high stress.

### Methodology

A descriptive survey research design was employed for the purpose of this study in order to determine the influence of stress on academic achievement. This is primarily because the variable under investigation i.e 'Academic Achievement' already exists in the examination office of the school hence was used in retrospect. Again the variable of interest of the study have occurred prior to the researcher's attempt to investigate and also the researcher did not in any way manipulate or control the variable.

The population of the study comprised 7,670 undergraduates of Federal University Dutsin-Ma, Katsina State, from which a sample of 365 students was selected using a multi-stage sampling technique. Data were collected using an adapted version of the Perceived Stress Scale (PSS) developed by Cohen (1994). The reliability of the instrument was established through a pilot test conducted on 40 undergraduates of Federal University Dutsin-Ma, Katsina State, who were not part of the study sample; the instrument yielded a reliability index of 0.77. CGPA was used as measure of academic achievement. To analyze the data, Descriptive statistic of simple percentage was used to answer research questions 1, also Analysis of variance (ANOVA) was used to test hypothesis 1 of the study.

Results

### Research Question One

What are the levels of stress among undergraduates of Federal University Dutsin-Ma, Katsina State?

**Table 1: Levels of Stress among Undergraduates of Federal University Dutsin-Ma, Katsina State**

SN	Variable	Variables	N	Percentage%
	Stress	Low	50	13.7%
		Moderate	205	56.2%
		High	110	30.1%
		Total	365	100%

Table 1 above present the proportions of stress among undergraduates of Federal University Dutsin-Ma, Katsina State, the table revealed that 50 (13.7%) of the students have low level of stress while 205 (56.2%) of the students have moderate level of stress and 110 (30.1%) of the students have high level of stress. Thus, based on descriptive result, Low, moderate and high are the proportion of students' stress and Majority of Federal University Dutsin-Ma, Katsina State undergraduates are found to have moderate level of stress.

### Hypothesis

**Ho1:** There is no significant difference in academic achievement among undergraduates of Federal University Dutsin-Ma, Katsina State with low, moderate and high stress.

**Table 2: ANOVA Summary Table showing differences in the Academic Achievement among Undergraduates of Federal University Dutsin-Ma**

Test Variables		Sum of Square	Df	Mean Square	F	Sig.
	Between Groups	42.822	2	21.411	36.00	.000
Academic Achievement	Within Groups	215.284	362	.595		
	<b>Total</b>	<b>258.106</b>	<b>364</b>			

The result of the test difference using one-way ANOVA obtained is shown in table 2 above. The result showed the F statistics (365) = 36.003 and p Value= 0.000,  $\alpha = 0.05$  for academic achievement. The mean of academic achievement based on the levels of Stress among undergraduates of Federal University Dutsin-Ma, Katsina State are significantly different because the p value (0.00) is less than the alpha value (0.05). Thus the null hypothesis is rejected since  $0.000 < 0.05$ . Therefore, significant difference exists in academic achievement among undergraduate students of Federal University Dutsin-Ma, Katsina State with different levels of stress.

### Discussion of Findings

The paper investigated the influence of stress on academic achievement among undergraduate students of Federal University Dutsin-Ma, Katsina State, Nigeria. The finding of this study are discussed and compared with previous studies done by other researchers. These discussions are carried out based on the matters related with the research question and null hypotheses that guided the study.

Finding from the research question 1 revealed that majority of undergraduates of Federal University Dutsin-Ma Exhibit moderate level of stress. This finding is in line with the findings of Adekale, Oyebade, Adeleke, & Atolagbe (2022) in their work titled Stress among university students. Their findings revealed that majority of university students reported a moderate level of stress.

The finding of the study from hypothesis 1 which seek to find out whether there is difference between academic achievement and undergraduates whose have low, Moderate and high level of stress. This mean the less stress you have the high academic achievement you attain. This finding is in line with the findings of Ishaya, Abubakar, Shekwolo&Temidayo (2019) on the study titled influence of stress on academic performance in Nasarawa State University Keffi, Nigeria. And found that academic stress has a great influence on students' academic performance. In another study which is in support with present study is the work of Oyewobi, Bolarin, Oladosu&jimoh (2020) which was conducted on the influence of stress and coping strategies on undergraduate students' performance in federal University Minna, Nigeria.

The findings revealed that a significant linear associations have been established between all the proposed paths and the outcome factor. Similarly, Herath (2019) embarked on a study to find out the Relationship between Academic Stress and Academic Achievements of the Undergraduate Students in Sri Lanka. The findings of the study revealed that they are significant correlation between stress and academic success. The finding is also supported by the study of Olape, Lasiele, Chiaka &

Abidoye (2017) examined the the relationship between level of stress and students' academic performance in Universities in Kwara State, Nigeria. The finding revealed that significant relationship exists between the stress level and academic performance of the students. But, the study is not in support with the findings of Siraj, Salam, Roslan, Hassan & Othman (2014) which investigated stress and its association with the academic performance of undergraduate fourth year medical students at Universiti Kebangsaan Malaysia. The study revealed that respondents with a high and severe stress level were observed to have higher CGPA. The finding support the theoretical postulation of Lazarus and Folkman's cognitive appraisal theory of stress that emphasizes a relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being.

### **Conclusion**

Based on the findings of the study, it was concluded that stress has a statistically significant influence on the academic achievement of undergraduates of Federal University Dutsin-Ma, Katsina State. The observed significant differences in academic performance across varying levels of stress indicate that students do not perform equally under different stress conditions. This suggests that higher levels of stress are associated with poorer academic outcomes, as excessive stress can impair concentration, reduce learning effectiveness, and hinder overall academic success. Therefore, stress is a critical factor in determining students' academic achievement.

### **Recommendations**

Based on the findings of the study, the researcher recommends that:

- i. Psychologists, counselors, and lecturers should intensify efforts to sensitize students on the impact of stress on academic performance. This can be achieved through regular counseling sessions, awareness programs, and guidance services aimed at helping students develop effective stress management strategies.
- ii. . The Academic planners of Federal University Dutsin-Ma and similar institutions should carefully structure academic schedules to ensure adequate intervals between lectures, continuous assessments and examinations. In addition, examination timetable clashes should be minimized in order to reduce excessive academic pressure and improve students' overall academic performance.
- iii. Students should be encouraged to adopt healthy study habits and lifestyle practices, including proper time management, regular rest, and engagement in recreational activities, to help them manage stress effectively and enhance their academic achievement.

### **References**

- Abdulrahman, H. S. (2015). Anxiety, cognitive styles and personality on academic achievement among senior secondary school students in Kano Municipal Zone (Unpublished M.Ed. dissertation). Bayero University, Kano.
- Abiodun, O. A., & Oluwole, F. A. (2020). Prevalence and predictors of stress among undergraduate students in a Nigerian university. *Journal of Mental Health and Human Behaviour*, 25(2), 46–53.
- Adekale, T. A., Oyebade, A., Adeleke, A. A., & Atolagbe, J. E. (2022). Stress among university students in Osun State, Nigeria. *International Journal of Health Sciences and Research*, 12(7), 8–24.
- Alzukari, R., & Gallo, K. (2023). The effect of stress on academic achievement. *Hawaii International*

- Conferences, 7(9), 1–10.
- Herath, H. M. W. M. (2019). Relationship between academic stress and academic achievements of undergraduate students in Sri Lanka. *Global Journal of Human-Social Science: Arts & Humanities – Psychology*, 19(7), 1–7.
- Ishaya, M. N., Abubakar, A. D., Shekwolo, D. M., & Temidayo, O. F. (2019). Influence of stress on academic performance in Nasarawa State University, Keffi, Nigeria. *Al-Hikmah Journal of Arts and Social Science Education*, 1(2), 35–42.
- Okorie, A. (2016). Relationship among stress, coping strategies and academic achievement of university undergraduate students in Imo and Kaduna States, Nigeria (Unpublished Ph.D. thesis). Ahmadu Bello University, Zaria.
- Olope, O. R., Lasiele, Y. A., Chiaka, A. E., & Abidoye, T. K. (2017). Stress level and academic performance of university students in Kwara State, Nigeria. *Makerere Journal of Higher Education*, 9(1), 103–112.
- Oyewobi, L. O., Bolarin, G., Oladosu, N. T., & Jimoh, R. A. (2021). Influence of stress and coping strategies on undergraduate students' performance. *Journal of Applied Research in Higher Education*, 13(4), 1043–1061.
- Siraj, H. H., Salam, A., Roslan, N. A., Hassan, T. H., & Othman, M. N. (2014). Stress and its association with the academic performance of undergraduate fourth-year medical students at Universiti Kebangsaan Malaysia. *International Medical Journal Malaysia*, 13(3), 261–282.