INFLUENCE OF TEST ANXIETY ON ACADEMIC ACHIEVEMENT AMONG UNDERGRADUATES OF FEDERAL UNIVERSITY DUTSIN-MA KATSINA STATE

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Abstract

The study investigated the influence of test anxiety on academic achievement among undergraduate students at Federal University Dutsin-Ma, Katsina State, Nigeria. Guided by three objectives, one research question, and two hypotheses, the study adopted an ex-post facto and descriptive research design. From a population of 7,670 students, a sample of 365 was selected using a Research Advisor sampling table. Data were collected using an adopted version of the Westside Test Anxiety Scale (Driscoll, 2004) 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 were used to answer the research question, while ANOVA and linear regression were applied to test the hypotheses. Findings showed that 45.8% of students experienced high levels of test anxiety. Significant differences in academic achievement were observed among students with low, moderate, and high anxiety levels. Test anxiety was also found to significantly influence academic achievement. The study recommended that psychologists, counsellors, and lecturers raise awareness of test anxiety's effects. Additionally, academic schedules should allow adequate intervals between assessments and exams, and stakeholders should organize seminars and workshops to address and minimize test anxiety.

Keywords*: Influence, Test Anxiety, Academic Achievement*

Introduction

A number of scholars have found that a country's or community's ability to develop is mainly dependent on the caliber of education provided in that nation. Thus, in any community, formal education continues to be the means of fostering social and economic advancement as well as social mobilization. Academic achievement assists in determining a student's success or failure, choosing students for different courses and choosing students for various jobs. In terms of knowledge, comprehension, skill and application, it refers to the degree of learning in a particular subject that is typically assessed by teachers in the form of test results during their annual assessment. Unfortunately, it has been observed over the years that some students excel academically while others are underachievers. Researchers consistently attempted to identify the major predictors of individual academic achievement; intelligence, gender, motivation, socio economic status, home background and personality to mention a few have been extensively explored as the factors been responsible for academic achievement (Abdurrahman, 2015).

Anxiety is one of the most prevalent emotions and a fundamental component of all human conduct. Examinations and tests, without doubt, are unavoidable part of every student's educational journey. The importance of examination as an integral part of education cannot be denied (Neemati, Hooshangi, & Shurideh 2014). Anxiety is more common at test period (Yüksel, Sevim & Çelimli, 2018). Most students experience some level of nervousness when anticipating or taking an exam. A little anxiety during exams is required that will help students to get motivated and learn, for some students, test anxiety becomes so debilitating that it impairs optimal performance (Talwar, Matheiken, Cheng, & Sabil 2019). Students who suffer from anxiety disorders tend to approach their studies with a passive attitude, as seen by their lack of interest in studying, poor performance on tests

and assignments, etc. Anxiety is a widespread phenomenon that contributes to poor academic performance among students all around the world. It is an undeniable universal truth of human existence that determines a person's success in a variety of circumstances.

An unfavorable reaction to assessment is test anxiety. Test anxiety is defined as the physiological and behavioural responses related to taking oral or written tests that is experienced before and during test taking about possible negative consequences or failure on an examination (Reinhard, 2015). According to Khosravi and Bigdeli (2008), it is the most significant issue that students around the world are dealing with. Students that suffer from test anxiety are psychologically distressed and anxious all the time during test settings. Some people may not perform to their academic capacity due to test and examination anxiety. It is impossible to overstate how bad exam anxiety is for students' academic performance. Students with high exam anxiety may not do well on an assignment. These may be brought on by their low self-efficacy in academics, low self-esteem and displayed helplessness. These, more frequently than not, could have some effects on society as a whole as well as the wellbeing of such students. Therefore, identifying factors such as examination anxiety that influences student achievement to learn and attain success in classroom task continues to be the goal of researchers considering the fact that examination anxiety is a recurring stressful situation that is faced by large number of students (Okoiye, 2011).

In a study conducted by Dawood, Ghadeer, Mitsu, Almutary and Alenezi (2016) which is titled Relationship between Test Anxiety and Academic Achievement among undergraduate Nursing Students College of Nursing, King Saud bin Abdul-Aziz University for Health Sciences- Riyadh (KSAU). The population of the study consists of all undergraduate students of King Saud bin Abdul-Aziz University for Health Sciences. A descriptive correlation research design was utilized to conduct the current study on convenience sample of 277 undergraduate nursing students from all academic levels of the university. A Test Anxiety Inventory (Spielberger, 1980) was used to measure the primary outcome variable of the study. The findings of the study revealed statistically significant relationship between test anxiety scores and undergraduate nursing students academic level which explain that undergraduate nursing students' in higher academic level experience less test anxiety. The result of the study concluded that a significant percentage of the students participated in the study experience moderate to severe levels of test anxiety. The research recommends that it is fundamental to help out undergraduate nursing students to deal with stress and trim down test anxiety efficiently through group work via students, parents, academic advisors and other concerned parties.

Ahmed (2016) conducted a study to explore the relationship between test anxiety level and academic achievement among nursing Students College of nursing, Zagazig University. A descriptive correlational design was utilized in this study. The population of the study consist of all the undergraduate students of the college of nursing Zagazig University. The study utilized a convenience sample of 160 female students in college of nursing who approved to join in the study starting from 1st to 4th year of undergraduate. Data were collected by using test anxiety questionnaire (TAQ). The study results indicated that there were highly statistically inverse correlation between total test anxiety and grade point average. It was concluded that test anxiety has a significant and efficient impact on nursing students' performance. It was recommended that the students with superior test anxiety must be recognized and treated in order to increase their academic attainment.

Similarly, Agbor, Chile, and Ruth (2020) investigated anxiety and its consequences on students' academic achievement. The study adopted correlational study. A sample of 170 senior secondary students was drawn from the population of 345 through stratified random sampling technique. The college students' anxiety (CSA) was the instrument used for data collection. The data generated from these instruments were analyzed using percentage. The result revealed that that there was a weak but significant negative relationship between anxiety and student academic achievement, but when anxiety and students' academic achievement were combined there was no significant relationship. In Nigeria, a study conducted by Salami, Akinboye, and Akinyemi (2016) among university students found that 35.8% of the participants had high levels of test anxiety. Another study by Adesemowo and

Aremu (2017) among secondary school students in Nigeria found that 60.9% of the participants had moderate to severe levels of test anxiety.

Globally, a study by Zeidner and Mathews (2020) found that the prevalence of test anxiety varies depending on the country and the academic level of the students. They reported that the prevalence of test anxiety ranges from 10% to 40% among primary school students, from 20% to 50% among secondary school students, and from 25% to 60% among university students.

Statement of the Problem

The researcher observed a poor academic achievement of undergraduate students, especially the level one and two hundred students of Federal University Dutsin-Ma. The rate of failure and poor academic performance among students in various departments is a growing concern. For instance, in the department of special education, there has been a consistent trend of low pass rates over the past three academic sessions. In the 2020/2021 session, out of the 184 registered students, only 54 students passed, while 130 students had carryovers from previous sessions. Similarly, in the 2018/2019 session, only 14 out of 100 examined students passed, and in the 2017/2018 session, 32 out of 95 students passed. In the department of applied chemistry, the situation is also worrisome, with poor performance and high rates of carryovers observed in multiple academic sessions. In the 2019/2020 session, out of 124 examined students, only 34 students passed with no carryovers, while 97 students failed with carryovers. In the 2018/2019 session, only 32 out of 74 examined students passed, with 42 students having carryovers.

In the 2020/2021 session, while 51 students out of 117 examined students passed with no carryovers, the rest failed with carryovers. In the science education department, a similar trend of low pass rates is also evident. In the 2020/2021 session, out of 179 examined students, only 74 students passed without carryovers. In the 2019/2020 session, out of 194 examined students, only 86 students passed, while 108 students had carryovers (Examination Office, Fudma 2022). This implies that despite all the efforts being put in place towards improving the quantity and quality of teaching and learning in the university, yet a significant number of undergraduate students achieve comparatively low. This is what triggered the researcher to undertake the study of this nature to see the influence of test anxiety on academic achievement among undergraduates. So many factors may have contributed to this, some of which include test anxiety, stress, socio-economic status and so on, but to the best knowledge of the researcher there is no study on the influence of test anxiety on academic achievement among undergraduates of federal university Dutsin-Ma, Katsina State.

In view of this, the study is to investigate the influence of test anxiety on academic achievement among undergraduates of Federal University Dutsin-Ma, Katsina State.

Objectives of the Study

The study sought to achieve the following objectives.

i. To determine the levels of test anxiety among undergraduates of Federal University Dutsin-Ma, Katsina State.
ii. To determine the differences in academic achievement among undergraduates of Federal University Dutsin-Ma, Katsina State with low, moderate and high test anxiety.
iii. To determine the influence of test anxiety among undergraduates of Federal University Dutsin-Ma, Katsina State.

Research Question

i. What are the levels of test anxiety among undergraduates of Federal University Dutsin-Ma, Katsina State?

Hypothesis

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

Ho2: There is no significant influence of test anxiety on academic achievement among undergraduate students of Federal University Dutsin-Ma, Katsina State.

Methodology

An Ex-post facto and Descriptive survey design was employed for the purpose of this study in order to determine the influence of test anxiety 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 all the variables of interest of the study have occurred prior to the researcher's attempt to investigate them and also the researcher did not in any way manipulate or control either of the variables.

Bichi in Kabiru 2018 asserts that "since the educational researcher is often concerned with variables that are not inherently manipulated as they are existing in his subjects, he often has no choice other than to rely on already existing group" thus the researchers choice in considering ex-post facto and descriptive survey design appropriate for the study. The population of the study comprised of seven thousand six hundred and seventy (7670) undergraduates of Federal University Dutsin-Ma, Katsina State, out of which 365 were selected as sample base on research advisor table of determining sample size. The data were collected using two instruments which is an adoption of Westside test anxiety scale by Driscoll (2004) and the Cumulative Grade Point Average (CGPA) was used as measure of academic achievement. Reliability of the Test anxiety instrument was reviewed via a pilot test carried out on (40) undergraduates of Federal University Dutsin-Ma, Katsina State who were not part of the sample, the instruments were found to have the reliability index of 0.77 To analyze the data, Descriptive statistic of simple percentage was used to answer research questions 1, Analysis of Variance (ANOVA) was used to test hypothesis 1, and linear regression was used to test hypotheses 2 of the study.

Results
Research Question One

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

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

SN	Items	Variables	N	Percentage%
1	Test Anxiety	Low	46	12.6%
		Moderate	152	41.6%
		High	167	45.8%
		Total	**365**	**100%**

The table revealed that 46 (12.6%) of the students have low level of test Anxiety while 152 (41.6%) of the students with the moderate level of Anxiety and 167 (45.81%) of the students have high level of test anxiety. Thus, based on descriptive result, Low, moderate and high are the proportion of students' tests Anxiety and majority of Federal University Dutsin-Ma, Katsina State undergraduates are found to have high level of Test Anxiety.

Hypotheses

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

Table 2: *ANOVA for Difference in Academic Achievement among Undergraduates of Federal University Dutsin-Ma with low, moderate and high Test Anxiety*

Test Variables		Sum of Squares	Df	Mean Square	F	Sig.
	Between Groups	89.706	2	44.853	96.417	.000
Academic Achievement	Within Groups	168.401	362	.465		
	Total	258.107	364			

The result of the test difference using one-way ANOVA obtained is shown in table 2 above. The result showed the *F* statistics (365) = 96.417 and *p* Value= 0.000*, a*= 0.05 for academic achievement. The result revealed that, the mean of academic achievement on the levels of test Anxiety are significantly different because the p value (0.000) is less than the alpha value (0.05). Thus the null hypothesis is rejected and alternate hypothesis accepted since 0.000<0.05. Therefore, significant differences exist in academic achievement among undergraduates of Federal University Dutsin-Ma, Katsina State with different levels of test anxiety.

Ho$_2$: There is no significant influence of test anxiety on academic achievement among undergraduate students of Federal University Dutsin-Ma, Katsina State.

Table 3: *Regression table for Influence of Test Anxiety on Academic Achievement among Undergraduates of Federal University Dutsin-Ma.*

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	15.915	1	15.915	30.861	.000
Residual	51.571	100	.516		
Total	67.486	101			

The result showed the *F* statistics (365) = 30.861 and *p* Value= 0.000*, a*= 0.05 for academic achievement. The result revealed that, there is significant influence of test anxiety on academic achievement since the p value (0.000) is less than the alpha value (0.05). Therefore, test anxiety influence academic achievement of undergraduate students of Federal University Dutsin-Ma, Katsina State.

Discussions

Finding from research question 1 revealed that majority of undergraduates of Federal University Dutsin-Ma Exhibit high level of test anxiety. This finding is against the findings of Kaswadi, Malik & Keat (2020) in their wok titled test Anxiety and academic achievement among undergraduate students of a private university in Malaysia. Their finding revealed that both the boys and the girls were found to have low levels of anxiety as indicated by the (BAI). This may be due to the variation of location and time. The finding from hypothesis 1 which seek to find out whether there is difference between academic achievement and undergraduate students whose have low, Moderate and high level of anxiety, the finding indicates that Significant difference exists in academic achievement among undergraduate students of Federal University Dutsin-Ma, Katsina State with different levels of test anxiety. The finding of this study is similar to the findings of Ahmed (2016) conducted on the relationship between test anxiety level and academic achievement among nursing Students College of nursing, Zagazig University. It was concluded that test anxiety has a significant and efficient impact on nursing students' performance. In the same vein, it's in support with the work of Alemu & Feyssa (2020) titled relationship between test anxiety and academic achievement of Senior Secondary School students of Shirka Woreda, Ethiopia. The findings of the study revealed that a significant negative relationship exist between test anxiety and students' achievement scores.

The finding from hypothesis 2 which seek to find out influence of test anxiety on academic achievement among undergraduate students of Federal University Dutsin-Ma, Katsina State. The result revealed that, there is significant influence of test anxiety on academic achievement. The finding of the study is related with finding of Gichohi (2019) who conducted a study on the influence of anxiety on academic performance among students at technical University of Kenya. It revealed that there is a significant correlation between anxiety and performance academically among students in the University.

Conclusion

Base on the findings of the study, it was concluded that academic achievement of undergraduates of Federal University Dutsin-Ma, Katsina State was influenced by Test Anxiety.

Recommendations

Based on the findings of the study, the following recommendations were made:

i.   Psychologists, Counsellors, and Lecturer's should sensitize all students on the influence of test anxiety on academic performance.

ii. Conference, Seminars and workshop should be organized to students and all stakeholders on the influence of test anxiety on academic achievement irrespective of gender influences so as to minimize them.

iii. Federal University Dutsin-Ma and similar Universities should plan academic activities in such a way that adequate intervals will be given between the periods of continuous assessment test and examinations in order to minimize stress situation between the students which may lead to test anxiety. Similarly lecture and examination clashes should be effectively minimized in order to decrease high stress level of the students.

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