



POSTGRADUATE STUDENTS' ANXIETY AS A PREDICTOR OF ACHIEVEMENT SCORES IN EDUCATIONAL RESEARCH METHODS AND EDUCATIONAL STATISTICS IN PUBLIC UNIVERSITIES IN ANAMBRA STATE

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ABSTRACT

The study investigated postgraduate students' research anxiety as predictor of achievement scores in Educational Research Methods and Educational Statistics in public Universities in Anambra State. Two research questions and corresponding hypotheses guided the study. Correlational and ex-post facto research designs were employed for the study. The population of the study was 350 students. The sample was 150 students obtained through multi-stage sampling technique. A structured questionnaire titled 'Postgraduate Students' Research Anxiety Questionnaire (PSRAQ) was used for data collection. The instrument was subjected to content validation by three experts. Two experts are from Measurement and Evaluation unit and one expert from Educational Psychology. The internal consistency of the instrument was determined using Cronbach alpha and the reliability coefficient of 0.86 was obtained, showing that the instrument is reliable and could be used for data collection. Data were collected by the researcher with the help of two research assistants. The data collected were analyzed using simple regression analysis. Findings from the results of the analysis revealed that, postgraduate students' research anxiety was not a significant predictor of achievement scores in Educational Research Methods in public Universities in Anambra State. Also, it was revealed that postgraduate students' research anxiety was not a significant predictor of achievement scores in Educational Statistics. It was therefore recommended among others that, lecturers should offer more opportunities to postgraduate students to air their views on instructional matters, which will motivate them to improve their performance in Educational Research Methods and Educational Statistics.

Keywords: Postgraduate Students; Anxiety; Achievement Score; Educational Research Method; Educational Statistics

Introduction

Educational Research Methods and Educational Statistics are basic preconditions for postgraduate studies and have crucial roles of improving educational processes. Educational Research Methods and Educational Statistics are 3-3-unit credit courses for all postgraduate students of all faculties of education in Nigeria's Universities. The courses equip students with the techniques in research and how they are used in conjunction with Statistics to initiate, develop and execute research work and produce quality research reports. Research constitutes an important part of the curriculum in almost all postgraduate programs to help students improve their skills in general enquiry and critical thinking; acquire the basic skills needed to complete their own research and gain subsidiary skills necessary for their professions. Batanero and Borovcnick in Nmesoma



and Romy (2022) submitted that Educational Statistics is at the heart of any type of quantitative reasoning necessary for making vital advances in the engineering, medical, social sciences, business and industry. The expectation is that after a statistical course for the postgraduate students, they would possess the requisite statistical literacy to finish their dissertation. Over some decades, it has been seen so many discoveries and interventions that took place through research and statistics and world has got numerous theories which help to proffer solutions to human and societal problems. However, research interest and productivity might be compromised when postgraduate students give in to anxiety.

Anxiety can be simply put as a feeling of uneasiness or apprehension before, during, or after a particular event because of worry or fear. Appropriate levels of anxiety can enhance students' memory, attention, motivation and can lead to improved performance. Anxiety affects people of all ages who have to be assessed, evaluated and graded on their abilities or achievements. However, the manifestations of anxiety are not restricted to tests and examinations alone; it also applies to different academic activities in school. Anxiety might be a factor in determining academic achievement of postgraduate students in Research courses. The responsibility of imparting knowledge revolves the teacher who plans, organizes and implements the teaching-learning process. The students are then assessed regarding their attainment of the objectives of the academic procedure they were exposed to, which yields a result known as academic achievement.

Academic achievement is the outcome of education and by extension the extent of achievement of educational goals by students, teachers or instructors. It represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environment specifically in school, College or University. It is a concept that comprises different domains of learning. It can be seen as the sum total of information a student has at his command when he completes a cycle of academic program (Adepoju & Akinwumi, 2019).

In spite of all efforts made by lecturers in Educational Research Methods and Educational Statistics in public Universities in Anambra State particularly at postgraduate level, the performance of some postgraduate students in the courses has not been satisfactory. Some students often develop high anxiety whenever they have encounter with research courses. Research methodology has consistently pointed to the fact that students often harbour anxiety and negative feelings or attitudes towards taking a compulsory module in research methodology (Bolin & Yoon, 2016).

The above submissions have created debates among various educational stakeholders on who is responsible for some postgraduate students' poor performance in these courses. From the researcher's observation, a number of postgraduate students see Educational Research Methods and Educational Statistics as very difficult courses that create excessive anxiety in them. Hence, the need to find out postgraduate students' anxiety as a predictor of achievement scores in Educational Research Methods and Educational Statistics in public Universities in Anambra State.

Two research questions with corresponding hypotheses guided the study.

The following research questions guided the study.

1. Does postgraduate students' anxiety predict achievement scores in Educational Research Methods in public Universities in Anambra State?



2. Does postgraduate students' anxiety predict achievement scores in Educational Statistics in public Universities in Anambra State?

Hypotheses

The following null hypotheses were formulated for the study

1. Postgraduate students' anxiety does not significantly predict achievement scores in Educational Research Methods in public Universities in Anambra State
2. Postgraduate students' anxiety does not significantly predict achievement scores in Educational Statistics in public Universities in Anambra State

Methodology

Correlational and ex-post facto research designs were employed for the study. A total of 350 (three hundred and fifty) postgraduate students of faculties of education of two public Universities in Anambra State which offered the courses in 2021/2022 academic session served as the population for the study. Systematic sampling technique was used to obtain 150 postgraduate students (one hundred and fifty) that served as sample for the study.

A structured questionnaire titled 'Postgraduate Students' Anxiety Questionnaire (PSAQ) was used for data collection. The instrument was subjected to content validation by three experts. The internal consistency of the instrument was determined by utilizing Cronbach alpha statistics, and Cronbach alpha coefficient of 0.86 was obtained, showing that the instrument is reliable and could be used for data collection. Direct delivery approach was employed in the administration of the instrument with the help of two research assistants. All copies of questionnaire administered were collected at spot.

The research questions and hypotheses were answered using simple regression statistics. All hypotheses were tested at 0.05 level of significance.

Decision rule:

The null hypothesis was not accepted if p-value was less than the alpha level of 0.05; otherwise, was accepted.

Research Hypothesis 1: Postgraduate students' anxiety does not significantly predict of achievement scores in Educational Research Methods in public Universities in Anambra state.

Table 4: Summary of ANOVA Test of Regression Analysis for Postgraduate Students Anxiety Predictor of Academic Achievement Scores in Educational Research Methods

Model	Sum of Square	df	Mean of Square	F	Sig.
Regression	495.897	1	495.897	2.436	.121
Residual	30130.696	148	203.586		
Total	30626.593	149			

a. Dependent Variable: Educational Research Methods

b. Predictor: (Constant) Anxiety



Results presented in Table 4 showed the correlation coefficient for postgraduate anxiety was 0.127 and the co-efficient of determination of 1.6%, and adjusted R of 0.010.. These values showed that postgraduate students' anxiety accounted for 1.6% Of postgraduate students' achievement scores in Educational Research Methods, this value indicates that 1.6% of the variance in Educational Research Methods (achievement scores) can be predicted from postgraduate research anxiety. The results also show an F-value of 2.436 and not significant at $P > 0.05$. Summarily, results in Table 3 showed an F value of 2.436. Testing at alpha level 5% (0.05), the p-value of 0.121 is greater than the alpha level 0.05 ($p > 0.05$). Hence, the tested null hypothesis is retained. Therefore, Postgraduate students' anxiety is not significant predictor of postgraduate students' achievement scores in Educational Research Methods in public Universities in Anambra State.

Research Hypothesis 2: Postgraduate students' anxiety does not significantly predict of achievement scores in Educational Statistics in public Universities in Anambra state.

Table 5: Summary of ANOVA Test of Regression Analysis for Postgraduate Students Anxiety as Predictor of Achievement Scores in Educational Statistics

Model	Sum of Square	df	Mean of Square	F	Sig.
Regression	512.417	1	512.417	1.480	0.226
Residual	51238.577	148	346.207		
Total	51750.993	149			

a. Dependent Variable: Educational Statistics

b. Predictor: (Constant) Anxiety

Results presented in Table 5 showed the correlation coefficient for postgraduate anxiety was 0.100 and the co-efficient of determination of 1%, and 0.003(R^2 adjusted). These values showed that postgraduate students' anxiety accounted for 1% Of postgraduate students' achievement scores in Educational Statistics, this value implies that 1% of the variance in Educational Statistics (achievement scores) can be predicted from postgraduate anxiety. The results also showed an F-value of 1.480 and a p value of 0.226. Testing at alpha level 5% (0.05), the p-value of 0.226 is greater than the alpha level 0.05 ($p > 0.05$). Hence, the tested null hypothesis is retained. Therefore, Postgraduate students' anxiety is not significant predictor of postgraduate students' achievement scores in Educational Statistics in public Universities in Anambra State.

Discussion of Findings

The finding from the research hypothesis one revealed that postgraduate students' anxiety did not significantly predict their achievement scores in Educational Research Methods. This could be because the students were not allowed to air their views during instruction. The finding is in consonance with the study of Obaseki (2021) that stated that postgraduate students' anxiety did not significantly predict their achievement scores in Research Methods course. The study is in



disparity with the finding of Chapell, Blanding, Takahashi, Silverstein, Newman. Gubi and McCann (2005) who found that research anxiety is the major causes of students' underachievement and low performances especially at the postgraduate level and was shown to affect students' ability to profit from research courses contents or instruction. Also, Oludipe (2009) added that low research anxious students perform better than high research anxious students on both numerical and non numerical tasks. Nicholson (2019), found that research anxiety on students undergoing postgraduate programs are related to academic achievement of students. The finding again disagrees with McGuy (2017) said that fear and anxiety are often the causes of students failing to complete their dissertations and some students are confronted with some considerable anxiety toward the dissertation process.

The finding from the research hypothesis two revealed that postgraduate students' anxiety does not significantly predict their achievement scores in Educational Statistics. This could be due to the attitude of students towards mathematically related courses. The finding agrees with the study of Obaseki (2021) that stated that postgraduate students' anxiety did not significantly predict their achievement scores in Educational Statistics. Conversely, the finding of the study disagrees with the finding of Nmesoma and Romy (2022) which stated that postgraduate students' test anxiety significantly predicted their achievement scores in Advanced Statistics. Also, Rana and Mahmood (2020) found that there is a significant negative relationship exists between test anxiety scores and students' achievement scores. Therefore, it is concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance. Again, the finding disagrees with Onyeizugbo (2018) which that test anxiety negatively affects performance level; the higher the level of students' test anxiety the lower the level of students' learning outcome.

Conclusion

It was concluded that postgraduate students' anxiety was not a significant predictor of students' achievement scores in Educational Research Methods and Educational Statistics in the two public Universities in Anambra State.

Recommendations

Based on the findings of this study, the following recommendations were made.

- Researchers and educators should investigate other predictors of achievement scores in Educational Research Methods that might be more influential, such as prior knowledge, self- efficacy, study habit, or instructional quality.
- Educational planner should organize conferences, seminars and workshops that will enhance postgraduate students' attitudes in Educational Statistics, which may serve as a better predictor of achievement in the course



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