

ANXIETY LEVEL AS PREDICTOR OF ACADEMIC SELF-EFFICACY AMONG UNDERGRADUATE STUDENTS IN SOUTH-EAST, NIGERIA

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Abstract

This research work was designed to measure the extent to which anxiety level predicts academic self-efficacy among undergraduate students in South-East, Nigeria. Two research questions were posed and answered with corresponding null hypothesis. The population of the study consisted of 14,178 respondents. A multi stage random sampling procedure was used to draw up a sample consisting of 709 undergraduate students of both gender; 392 males and 317 females. The instrument used for collecting data was questionnaire. The instrument was validated by 3 experts. Mean scores, Standard Deviation and Pearson Product Moment Correlation Analysis was used to answer research questions while Regression Analysis was used to test the null hypotheses at 0.05 level of significance. An overview of the overall results showed that there exist a direct but moderate positive relationship between anxiety level and academic self- efficacy belief among undergraduate students. The result of the study also revealed that anxiety level significantly predicts academic self-efficacy belief among male and female undergraduate students. Based on the findings, the researchers recommended that; stake holders (University Authorities, psychologist and Counsellors should create awareness and organise seminars on the implication and impacts of anxiety level on academic self-efficacy belief. Also if the university teachers should wake up to their responsibilities to students, it will be a good help in arousing students interest and thus, increasing academic self-efficacy belief among undergraduate students.

Keywords: Anxiety, Academic Self-Efficacy, Undergraduate students

Introduction

Achievement in learning is critical to students' educational attainment. This implies that academic activities in school and their outcome might often arouse intense emotions which in one way or the other may likely affect students' academic self-efficacy belief and academic adjustment. One of the observed emotional problems which undergraduate students display in the university includes anxiety in confronting test or examination. According to Heath (2008) People react differently to anxiety.

Anxiety negatively affects students, more so if the anxiety is dealt with in an unhealthy manner and extends over a long period of time. A lot of undergraduate students are facing this problem today hence, demands urgent attention from well-meaning educators and scholars. Huberty, (1997) defined anxiety as a unique

emotional state characterized by feelings of distress and tension about real or anticipated threats that may manifest in cognitive, behavioural, physiological patterns. It is a complex emotional which may influence multiple domains of a student's functioning. Specifically, a student may experience cognitive, behavioural, and physiological effects. Common cognitive symptoms of anxiety include excessive worries, concentration difficulties, memory and attention problems. Anxiety may also be manifested through such behavioural symptoms as motor restlessness, difficulty sitting still, and attempts to escape or avoid anxiety-provoking stimuli or situation. Anxiety also includes physiological symptoms, such as muscle tension, increased perspiration, rapid heartbeat, headaches, and stomach-aches (Lopez, 2009).

Common anxiety symptoms include irritability, muscular tension, inability to concentrate, trembling, depression, irrational behavior, loss of appetite, and a variety of physical reactions such as headaches and accelerated heart rates. All these symptoms tend to affect academic self-efficacy belief among undergraduate students. Again, when a student is asked to stand and speak in front of a class, or is waiting for an examination or test to begin students might feel anxious. At one time or another, most undergraduate students feel anxious in some social situation to the extent that they may find it difficult to look into someone's eye or talk to someone.

Anxiety has become part of everyday experiences for undergraduate students. Fortunately for most of them, it does not entail intense suffering endured by those with anxiety disorders of which there are three important types: generalized anxiety disorder in which a person for no apparent reason feels uncontrollably tense and uneasy. Phobic disorder in which the person feels irrationally afraid of a specific object or situation and obsessive – compulsive disorder in which the person is troubled by repetitive thoughts and actions (Kremer. 1994)

According to Kring and Gordon (1998), Anxiety is a unique emotion which can be viewed in both positive and negative light. A slight amount of anxiety can be helpful, motivate and facilitate a student performance, whereas too much anxiety can be debilitating and hinder performance. For example, a student can become slightly anxious before a major examination. The slight anxiety felt can motivate the student to study for the examination thereby boosting his self-efficacy to do better because of the time spent preparing for the examination. In contrast, high level of anxiety may interfere with the student's ability to concentrate, process information, or retrieve information from long-term memory. Under these circumstances, the student is less likely to perform his or her best in the examination. Given all of these challenges, it is common for undergraduate students to feel uncertain about their own abilities and express frustration and anxiety over grades that accompanied academic activities which makes burning candle at both ends inevitable. Operationally, anxiety is the feeling of fear or panic about existing or presumptuous threat that is capable of positively or negatively affecting academic self-efficacy.

Although a university campus is a regulated academic environment, undergraduate students still feel free to engage in lots of activities that are social, academic and religious in nature which in turn sways their academic self-efficacy. According to Bandura (1997), self-efficacy is the belief in ones capabilities to

organize and execute the courses of an action required to manage perspective situations. In other words, self-efficacy is a person's belief in his or her ability to succeed in a particular situation. Self-efficacy reflects confidence in the ability to exert control over one's own motivation, behavior and social environment. These cognitive self-evaluations influence all manner of human experience including the goals for which people strive, the amount of energy expended toward goal achievement and likelihood of attaining particular behavioral performance. (Bandura, 2006)

Academic self-efficacy are students' beliefs about their ability to produce desired outcomes through their own actions. These beliefs are among the most important determinants of the behaviors students choose to engage in and how much they persevere in their efforts in the face of obstacles and challenges. (Friedman, 1998). In the same vein, Linnenbring & Pintrich (2002) defined Academic Self-Efficacy as individual's conviction that they can successfully achieve a designated level on an academic task or attain a specific academic goal.

The notion that women are more anxious than men is entrenched in our cultural beliefs and consistently supported by research on sex linked stereotypes. Men and women typically report differences in their general anxiety level, such as overall anxiety intensity or expressivity as well as in the experience and expression of specific emotions. Despite the popular belief that women are more anxious, sex reviewers and researchers disagree as to whether there is empirical support for sex differences in anxiety expression level and experience. Evidence suggests that women are more verbally and non-verbally expressive of anxiety than are men; women report expressing their fearful feelings with more intensity, more frequent facial expressions and more crying and freezing when afraid (Kring & Gordon, 1998).

Empirical evidence also supports the relationship between anxiety and academic self-efficacy. For instance, Yildirim, (2012) found that high self-efficacy is positively related mild anxiety level. Using structural equation modeling analyzing data of 297 undergraduate engineering students, Hsieh, Sullivan, Sass, and Guerra, (2012) found that anxiety level predicts academic self-efficacy.

Presumably, one of the contentious matters that has assumed significant debates today is the extent anxiety level predicts academic self-efficacy belief among students in south-East Nigeria. This has led to the desire to bridge the yawning educational gap between the south-East zone and the other southern geopolitical zones in Nigeria. This perhaps explains why the south-Eastern zone is clamoring for additional state creation so as to provide equal educational opportunities to the people. An empirical study of this nature could therefore help minimize the undue influence of anxiety on undergraduate students' academic activities in the area and consequently improve academic self-efficacy belief.

Statement of the Problem

Life in the university campus presents lots of challenges to undergraduate students. Most of these students are leaving their home for the first time and may not be quite ready to find their own way in a totally new environment which can be

overwhelming for the students. The first few weeks on campus can be a lonely experience, as the reality of separation from home and family sinks in. This phenomenon is called homesickness, and is a normal transitory reaction when someone is in a new place, and without familiar surroundings, family and friends. It can be a terrible feeling of sadness, grief, longing, and sometimes self-doubt. Not every student who leaves “home” experiences it, but most have this emotional experience at some point in their school lives.

University is not an extension of secondary school. In the university, students are seriously challenged to make the journey from dependence to independence and develop more mature relationships with other students from diverse background. The university campus is a regulated and challenging academic environment where the desire to achieve academic goals is paramount to every student. Since ways to achieving these goals do not always come easy, some students also have difficulty adjusting to the academic demands of university. It is also possible that some students may display frustration due to; inability to attain their stated goals, dissatisfaction in studying a course perceived to be foisted on them, gloomy looks due to lack of wherewithal to cater for their basic needs on campus. These and many other associated problems can stir up anxiety in undergraduate students. Anxiety can be productive or counterproductive in learning depending on its intensity or level. Although some researchers in Nigeria may have been investigating issues of test anxiety but none appears to have substantially focus on the link between anxiety level and academic self-efficacy among undergraduate students.

Also, given the inconsistencies in research findings and dearth of literature on how anxiety level predicts academic self –efficacy, the pertinent question to ask is this: will students’ belief in their ability to execute academic tasks be successfully enhanced or marred by their level of anxiety? Therefore, the problem of this study is to ascertain the extent anxiety level predicts academic self-efficacy belief and among undergraduate students in South-East, Nigeria.

Purpose of the Study

The general purpose of this study is to ascertain the correlation between anxiety level and academic self-efficacy among undergraduate students. Specifically, the study sought to determine the:

1. extent anxiety level predicts academic self-efficacy belief among undergraduate students.
2. extent anxiety level predicts academic self-efficacy belief among undergraduate students based on gender.

Scope of the study

The study is limited to the extent anxiety level predicts academic self-efficacy belief among undergraduates of federal and state universities in Anambra and Enugu States. The study covered three selected faculties namely: Education, Engineering and sciences.

The content of this study covered high, moderate and low levels of anxiety of undergraduate students as predictors of academic self - efficacy belief in South-East, Nigeria.

Research Questions

1. To what extent does anxiety level predicts academic self-efficacy belief among undergraduate students in south-east Nigeria?
2. To what extent does anxiety level predicts academic self-efficacy belief of male and female undergraduate students?

Hypotheses

H₀₁: Anxiety level will not significantly predict academic self-efficacy belief among undergraduate students.

H₀₂: Anxiety level will not significantly predict academic self-efficacy belief of male and female undergraduate students.

Methods

Correlational research design was used by the researcher. The population of the study was all the undergraduate students of faculties of Education, Engineering and Sciences in South-East Nigeria. The sample for the study consists of 709 undergraduate students comprising of 392males and 317females. The sample size was determined using 5% of the total population in line with Ali (2006) submission. Ali recommended that when a population is large, the sample of the study should be between the ranges of 5-20%. A multi stage sampling technique was used for the study. At the first stage, purposive sampling technique was used to select three (3) faculties from the selected universities. At the second stage, purposive sampling technique was used to select 100 and 400level students from the selected faculties. At the third stage, proportionate sampling technique was to select the students from each faculty and levels of study. The reason for using this technique was to ensure that the 100 and 400level students in the selected faculties and universities are equally represented. Finally, simple random sampling technique was used to select 709 students. The reason for using this technique is to give every undergraduate in the selected level and faculty equal opportunity of participating in the study.

Two instruments were used for data collection. These were Students' Anxiety Level Questionnaire (SALQ) containing 20 items which was developed with a guide from Zung Self-Rating Anxiety Scale (1971) and Hamilton Anxiety Rating scale (Hamilton, 1959). Also, Students' Academic self-efficacy belief questionnaire (SASBQ) containing 20 items was developed to assess students' academic self-efficacy belief. The instrument was developed with a guide from: Guide for Constructing Self-efficacy Scale (Bandura, 2006), and General Self-efficacy scale (Schwarzer, & Jerusalem, 1995). Both instruments were structured using the 4 point scale (i.e., Always, Often, Sometimes and Never) to measure the extent at which the respondents agree or disagree with a statement. Each response was scored as thus; Always = 4; Often = 3; Sometimes = 2; Never = 1 respectively.

The instruments were face- validated by two experts in Educational Psychology and one expert from Measurement and Evaluation from the faculty of Education, University of Nigeria, Nsukka. The validated instruments were thereafter trial tested on undergraduate students of Delta state University, Abraka. The scores of students were collated and analyzed for internal consistency using Cronbach Alpha Statistics. The following reliability co-efficient were obtained: 0.81 alpha, and 0.67 alpha for anxiety level and academic self-efficacy belief respectively. These were considered high enough to consider the instrument reliable to be used for the study. 709 copies of the instruments were administered to the respondents which were completed and used for data analyses. The data were analyzed using Mean scores, Standard Deviation and Pearson’s Product Moment Correlation Analysis. To ascertain the extent to which one variable predicts the other, the researchers adopted the following real limit of numbers based on the correlation coefficient: 0.80 and above (high extent), 0.60-0.79 (moderate extent), 0.40-0.59 (low extent), 0.00-0.39 (very low extent). The null hypotheses were tested using linear regression at 0.05 significance level. The decision rule was based on the 0.05 level of significance. Thus, any item whose calculated value is less than its critical value at 0.05 level of significance were not rejected while those whose calculated value is more than its critical value at 0.05 level were not accepted as being significant.

Results

Research Question One

To what extent does anxiety level predicts academic self-efficacy belief among undergraduate students in south-east Nigeria?

Table 1: Pearson’s Product Moment Correlation Analysis of Anxiety Level and Self Efficacy Belief

Variable	\bar{X}	SD	n	r	R ²
Anxiety Level	2.11	0.13	709	0.66	0.44
Self-Efficacy Belief	2.85	0.19			

R¹ = coefficient of determination

To answer this research question, the scores from the responses of the respondents on anxiety level were correlated with their responses on self- efficacy belief. The result shows that the correlation coefficient obtained between anxiety level and self -efficacy belief was .66. This means that, there exist a direct but moderate positive relationship between anxiety level and self -efficacy belief. Table 1 also shows that, the coefficient of determination (R²) associated with the correlation coefficient of .66 was .44. This coefficient of determination (R²) indicates that 44% of students’ anxiety level predicts students’ self- efficacy belief. In other words, 44% of students’ self- efficacy belief is accounted for by their anxiety level.

Hypothesis 1

H₀₁: Anxiety level will not significantly predict academic self-efficacy belief among undergraduate students.

Table 2: Regression Analysis of Anxiety Level and Self-Efficacy.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.466	1	2.466	115.61	0.00
Residual	3.178	707	0.021		
Total	5.644	708			

$\alpha = 0.05$

In order to test hypothesis 1 (H₀₁), Linear regression analysis was used. The result in Table 2 shows that an F-ratio of 115.61 with associated exact probability value of .00 was obtained. This probability value of .00 was compared with .05 set as level of significant for testing the hypothesis and it was found to be significant because .00 is less than .05. The null hypothesis which stated that; anxiety level will not significantly predict academic self-efficacy belief among undergraduate students is therefore rejected. Inference drawn was that, anxiety level significantly predicts academic self-efficacy belief among undergraduate students. In other words, anxiety level is a predictor of academic self-efficacy belief among undergraduate students.

Research Question Two

To what extent does anxiety level predicts academic self-efficacy belief of male and female undergraduate students?

Table 3: Pearson's Product Moment Correlation Analysis of Anxiety Level and Self Efficacy Belief of Male Students.

Variable	\bar{X}	SD	n	r	R ²
Anxiety Level	2.10	0.12	709	0.63	0.39
Self -Efficacy Belief of Male	2.85	0.14			

R² = coefficient of determination

To answer this research question, the scores from the responses of the respondents on anxiety level of male students were correlated with their responses on self- efficacy belief. The result shows that the correlation coefficient obtained between anxiety level of male students and self -efficacy belief was .63. This means that, there exist a direct but moderate positive relationship between anxiety level of male students and their self- efficacy belief. Table 6 also shows that, the coefficient of determination (R²) associated with the correlation coefficient of .63 was .39. This coefficient of determination (R²) indicates that 39% of students' anxiety level predicts male students' self- efficacy belief. In other words, 39% of male students' self- efficacy belief is accounted for by their anxiety level.

Table 4: Pearson Product Moment Correlation Analysis of Anxiety Level and Self Efficacy of Female Students.

Variable	\bar{X}	SD	n	r	R ²
Anxiety Level	2.10	0.12	709	0.68	0.47
Self -Efficacy Belief of Female	2.87	0.11			

R² = coefficient of determination

To answer this research question, the scores from the responses of the respondents on anxiety level of female students were correlated with their responses on self- efficacy belief. The result shows that the correlation coefficient obtained between anxiety level of female students and self- efficacy belief was .68. This means that, there exist a direct but moderate positive relationship between anxiety level of female students and their self- efficacy belief. Table 7 also shows that, the coefficient of determination (R²) associated with the correlation coefficient of .68 was .47. This coefficient of determination (R²) indicates that 47% of students' anxiety level -predict female students' self- efficacy belief. In other words, 47% of female students self -efficacy belief is accounted for by their anxiety level.

Hypothesis 2

H₀₂: Anxiety level will not significantly predict academic self-efficacy belief of male and female undergraduate students.

Table 5: Regression Analysis of Anxiety Level and Self Efficacy Belief of Male Students.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.040	1	1.040	43.749	0.00
Residual	1.593	707	0.024		
Total	2.632	708			

$\alpha = 0.05$

In order to test the null hypothesis 2 (H₀₂) with reference to male students, Linear regression analysis was also used. The result in Table 5 shows that an F-ratio of 43.74 with associated exact probability value of .00 was obtained. This probability value of .00 was compared with .05 set as level of significant for testing the hypothesis and it was found to be significant because .00 is less than .05. This means the null hypothesis is therefore rejected. Inference drawn was that, anxiety level significantly predicts academic self-efficacy belief of male undergraduate students. In other words, anxiety level is a significant predictor of male students' self- efficacy belief.

Table 6: Regression Analysis of Anxiety Level and Self Efficacy Belief of Female Students.

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.423	1	1.423	71.83	0.00
Residual	1.585	707	0.020		
Total	3.008	708			

$\alpha = 0.05$

In order to test the null hypothesis 2 (H_{02}) with reference to female students, Linear regression analysis was also used. The result in Table 6 shows that an F-ratio of 71.83 with associated exact probability value of .00 was obtained. This probability value of .00 was compared with .05 set as level of significant for testing the hypothesis and it was found to be significant because .00 is less than .05. This means the null hypothesis is therefore rejected. Inference drawn was that, anxiety level significantly predicts academic self-efficacy belief of female undergraduate students. With reference to hypothesis two, the result of the study therefore showed that anxiety level significantly predict academic self-efficacy belief of male and female undergraduate students.

Discussion of Findings

The study found out that there exist a direct positive relationship between anxiety level and self -efficacy belief but the relationship was moderate. Hence, there was a statically significant relationship between undergraduate student anxiety level and their academic self-efficacy belief. This finding suggests that students self -efficacy belief is accounted for by their anxiety level.

This result corroborates the previous finding of Hsieh, P., Sullivan, J.R., Sass, D. A., & Guerra, N. S, (2012).who observed that anxiety emerged as a significant predictor of academic self-efficacy in high achievers and insignificant predictor in low achievers. The results revealed that students who had overloaded anxiety engaged in healthy habits and resultantly greater motivation for studies that brought high scores among the high achievers and vice versa with low achievers.

The study further revealed that there exist a direct but moderate positive relationship between male students' anxiety level and their academic self- efficacy belief also; there exist a direct but moderate positive relationship between female students' anxiety level and their academic self-efficacy belief. Inference drawn was that, anxiety level significantly predicts academic self-efficacy belief of male and female undergraduate students. In other words, anxiety level is a significant predictor of male and female students' self- efficacy belief. However, female students' have higher anxiety level in relation to their academic self -efficacy belief. These findings are consistent with Abdel-Khalek and Alansari (2004) who asserted that females had higher mean anxiety scores than did their male counterparts.

Conclusion

Based on the outcome of this study, it was concluded that students' academic self-efficacy belief is accounted for by their level of anxiety. Also, anxiety level is a significant predictor of male and female students' academic self-efficacy belief. However, female students exhibit higher level of anxiety in their academic self-efficacy belief and academic adjustment than their male counterparts in South East Nigeria.

Recommendations

Based on the significant link between anxiety level and academic self-efficacy belief as established in this study, it is recommended that:

- Educators and psychologists should intensify efforts to assess the prevailing levels of academic self-efficacy belief among undergraduate students. If lower levels are identified, then appropriate measure should be taken to help raise undergraduate students' self-efficacy belief.
- In order to help increase students' self-efficacy belief, psychological counselling services should be provided for all undergraduate students. This is essential in that psychological counselling services can help undergraduate students develop academic self-efficacy belief.
- Parents should be assisted by family counsellors to learn how to develop high self-efficacy belief in their children irrespective of their gender at early stages of their lives. This is because positive attitude of the parents towards their children will boost their ego, strengthen their feeling of self-efficacy, and act as another form of motivation to adjust better in school.
- Curriculum planners and developers should design programs and courses that will motivate both male and female students to think critically and to enhance their academic self-efficacy belief.
- Educational psychologists should develop appropriate self-management techniques that will help lower students' anxiety and increase students' self-efficacy belief.

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