Test Anxiety as a Factor in Undergraduates' Academic Performance at the Nigerian Premier University of Education

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Abstract

This study investigates test anxiety as a factor in academic performance. The aim was to determine whether students' academic performance has any bearing on the level of their test anxiety. Four hundred students were randomly selected from the four colleges in Nigeria's premier university of education: (1) College of Applied Education & Vocational (2) College of Humanities (3) College of Social Management Studies and (4) College of Applied Sciences. One hundred students were randomly selected from each College. Students' Test Anxiety Questionnaire (STAQ) was designed and used to collect data. Data was analysed using Pearson Product Moment Correction and t-test. The result of the data analysis showed a high negative correlation between test anxiety and academic performance. Test anxiety experienced levels of male and female students also differ significantly. Regular periodic programmes to reduce test anxiety should be organised by the University Counselling Centre, while parents should help female students prepare better for examinations in order to reduce test anxiety.

KeyWords: *Test anxiety, academic performance, examinations.*

Introduction

It is natural for individuals to anticipate success or failure at the end of an effort. Students in particular would always feel concerned about their academic performance, especially after working hard to achieve success in an examination. However, the rate at which students express concerns about their academic performance vary from one person to the other. While some students see examination as "one of those things", others see it as a serious affair upon which their academic development and future career depend. Sometimes, the concern about examination becomes excessive, reaching a stage at which the individual becomes unable to control it and the phenomenon in itself makes it difficult for the individual to perform at his/her best. Such a phenomenon is known as test anxiety.

Anxiety is described as the apprehensive anticipation of future danger or misfortune accompanied by a feeling of dysphasia or somatic symptoms of tension (Stanton, 1993). From another perspective, anxiety is a feeling of unease that every human being experiences when faced with a stressful situation; this could be before an examination or an interview, or during the time they are experiencing a lot of worrisome incidence such as illness, disappointment, and so on.

Test anxiety is described as phenomenological, physiological and behavioural responses that accompany testing. It is a subjective emotional state experienced before or during a specific evaluation relating to the act of completing the evaluation itself, the threat of failing, and perceived negative consequences (Karatas, Alci & Aydin, 2013).

It is normal to feel anxious when facing difficult, dangerous or mild situation. Test-anxiety, especially worry, has impact on academic performance, and working memory (Eysenck, 2001). In addition, Sarason (1984) as cited in Keoghi, Bond, French, Richards and Davis (2004) found that test-anxiety decreases attention span, memory and concentration, then leads to low academic performance. Masson, Hoyois, Pcadot, Nahama, Petit and Ansseau (2004) found that high school students with

high test anxiety had a poor school performance. Thus, test anxiety contributes to academic achievement because of vulnerability to distraction and interference experienced by the students. Eysenck (2001) found that test anxiety creates irrelevant thoughts, preoccupation, and decreased attention and concentration, thus leading to academic difficulties.

In addition, test- anxiety is linked to memory and can have effect on academic achievement, because both of them disrupt attention and concentration. When attention and concentration are impaired, this will disrupt memory and as a consequence will lead to low academic achievement (Chen, Li, 2000 and Sanders, 2001, cited in Needham, 2006). Anxiety can be a positive and useful experience. Spielberger and Sarason (1998) expressed test anxiety as a situation-specific trait that refers to the anxiety states and worry conditions that are experienced during examinations. The level of anxiety can vary over time in response to both internal and external stimulation.

Naylor (1994) observed that test taking anxiety is significant for both educators and students while Tobais (1985) suggested that test anxiety might be a function of poor study habits or deficient skills of test taking which themselves have deleterious effects on academic performance. Some of the behaviours of anxiety can be recognised at the completion process of a questionnaire presented to students or participants. Those behaviours might include perspiration, excessive moment and questioning of instructions. Meanwhile, there are also stable individual differences in the degree to which anxiety is manifested in any given situation. A disruption or disorganisation of effective problem solving and cognitive control, including difficulty in thinking clearly, can also lead to test anxiety (Freidman & Bendas-Jacob, 1997).

The concept of anxiety is a loosely defined term. A useful paradigm for reviewing the diverse field of anxiety research has been proposed by Farooqi, Ghani & Spielberger, (2012). They summarized the various factors under antecedents, concomitants, and consequences of anxiety.

Two common constructs were used in conceptualizing anxiety: The dispositional construct, "trait anxiety", is primarily a function of past experience and has an internalized locus. The situational construct, often referred to as "state" or "situational anxiety", is directly a function of stressful conditions and has a contemporary locus. Studies on the consequences of anxiety on intellectual functioning and on learning have generally found that these effects are more maladaptive and debilitating than adaptive and facilitating (Sullivan, 2002).

Research also revealed that test-anxiety reduces attention span and concentration and then academic failure. Chapell, Benjamin, Michael, Masami, Brian, Aaron *et. al.* (2005) investigated relationship between test anxiety and academic performance of the undergraduate and graduate students and found a significant but small inverse relationship between test anxiety and academic performance in both groups.

Farooqi, Ghani & Spielberger, (2012) investigated the relationship of test anxiety and academic performance in college students. They found a significant decrement in GPA associated with test anxiety. High test-anxious students were also found to have poorer study skills. For high test-anxious group, quality of study habits and amount of study time were positively related to academic performance; whereas missing classes and postponement of exams were inversely related to performance.

Kassim, Hanafi and Hancock (2008) carried out a research to examine test anxiety and its consequences on academic performance among university students. The results of the research conducted suggested that test anxiety was negatively related to academic performance. Alos in Farooqi, Rafiq and Ghazal (2007) point of view, compared the level of test anxiety in students studying in semester examination system with those of annual examination system. Their findings showed no significant difference in test anxiety among students studying under the two educational systems.

Understanding students' emotional experiences during the testing process, in particular test anxiety, has long been a prime concern for researchers, educators, and counsellors as test anxiety may have a deleterious impact on test performance, academic success, and overall well-being (Bonaccio and Reeve, 2010). Test anxiety undeniably plays an important role in students' performance. This indicates that test-anxiety is predictor of academic achievement because of a vulnerability to distraction and interference. Mazzone, Ducci, Scoto, Passaniti and Vitiello (2007) found among high school students, that all subjects with a high level of test anxiety had poor school performance. Sullivan. (2002) found a significant relationship between a high level of test anxiety and lowered cognitive performance. In another perspective, Keoghi Bond, French, Richards and Davis (2004) found that test anxiety was related to distraction and school performance. In addition, Chapell, Micheal & Silverstein, (2005) found that differences in levels (low, moderate, and high) of test-anxiety had produced significant differences in performance among students. For instance, students with a low-test anxiety had a higher performance than the students with a moderate and higher test anxiety level and students with a moderate test-anxiety had a higher performance than the students with a higher test-anxiety level.

Furthermore, researchers are of the opinion that test-anxiety has an impact on students' academic performance Annett, Bender and Gordon (2007) and Putwain (2007). Invariably, test anxiety is known to be a key factor in academic performance. However, test anxiety as predictor of students' academic performance depends on the nature of anxiety measures used (Rafiq, Ghazal & Farooqi, 2007), nature of the task and stage in the learning process (Spielberger and Vagg, 1995). Test anxiety can be a devastating problem for many college and university students; because it may impair their performance and well-being in the long run (Farooqi, Ghani & Spielberger, 2012).

Cohen (2004) argues that performance anxiety (especially, test anxiety) may adversely affect people in every field of life, whenever people of all

ages have to be evaluated, assessed and graded with regard to their abilities, achievements or interests.

Under certain conditions, anxiety may not hinder performance or may even facilitate performance (Lekarczyk and Hill, 1969). There are a lot of factors like self-esteem, self-concept, and self-awareness among others that responsible for the development of test anxiety. Oderinde (2000) explained that inadequate preparation on the part of students' couple with attendant companion of fear of failure has affected academic performance and examination misconduct.

Another factor is self-concept that could not be over-looked is self-concept, which is the overall sum of self-referent information that an individual has processed, stored and organised in a systematic manner (Spielberger & Sarason 1998). The self-concept can be viewed as an image of oneself. Worry of suffering a reduction of the self-image, particularly in the eyes of peers, leads to higher test anxiety level (Friedman & Bendas-Jacob (1997).

Self-awareness is another factor of test anxiety. It is viewed as the feeling of being observed or evaluated by others. A more commonly recognised factor of test anxiety is the classroom climate. People, in general, have the need to manipulate and control their surroundings in order to produce a comfortable environment.

In a classroom setting, however, it may be difficult to have a total control of the surroundings. This may develop to possibility of different level of arousal. The level of arousal in relation to one's adaptation level will determine whether a positive or negative affective experience will result (Spielberger & Vagg, 1995). If an individual's experience is negative, then the test anxiety will be higher resulting to lower performance. More so, if an individual's experience is positive, then the test anxiety level will be lowered, thus leading to higher performance.

Maduabum (2001) also noted that the desire to satisfy parental expectations and ensure that future plans are not marred creates anxiety

and tension, all of which make cheating attractive to students and often result in poor performance. It is also gathered that sex differences is observed whereby females rather than males tend to experience high anxiety. Above all, it is necessary to examine motives, aptitudes, cognitive assessments of the task, and past experience when analysing test anxiety and its relationship to academic performance (Heather & April 2002). In a nutshell, test anxiety is expected to have a negative effect on academic performance. Stressful testing conditions increase high anxiety which in turn arouses defensive processes and prevents the victim from acknowledging the anxiety.

Against this background information and the persistent problem of diminishing academic performance among undergraduates in this University, it is imperative to explore the role of test anxiety in students' academic performance. While some studies found negative relationship between test anxiety and academic performance. (Mazzone et al, 2007, Sullivan, 2002), others reported positive correlation between the two constructs (Lckarczyk and Hill, 1962; Heather & April, 2002).

The importance of this is that research on the role of test anxiety on academic performance is still inconclusive. Besides, the possibility of cross-cultural variations in research findings inspires the present study. Many of the researches found and reviewed are foreign and it is believed that this study involving African subjects would facilitate an understanding of the phenomenon and have some pedagogical and counselling implications for higher education.

Statement of the Problem
The study investigated test anxiety as a factor in undergraduates' academic performance.

Research Questions
1. What is the relationship between students' test anxiety and level of academic performance?
2. Is there any significant difference between male and female students' levels of test anxiety?

Methodology
This is a descriptive study of the ex-post facto type in which the researcher simply conducts an objective study of factors, which already exist. None of the variables was manipulated.

Participants
The participants consisted of 400 students drawn from the four Colleges in the Universities that is, 100 students each randomly selected in the College of Applied Education and Vocational Technology, College of Humanities, College of Social Management Studies and College of Applied Sciences.

Instrumentation
Students' Test Anxiety Questionnaire (STAQ) developed and validated by the researcher was administered, while their currents Grade Point Average were used as measures of academic performance. The questionnaires are five-point Likert Scale type. The students were asked to indicate their feelings by ticking "Strongly Agree", "Agree", "Undecided", "Disagree", and "Strongly Disagree" in front of each item in the STAQ.

The questionnaires consist of 16 items. Students were not asked to indicate their names on the questionnaires so as to make responses anonymous. The split-half reliability coefficient of STAQ is 0.732

Data Analysis
Data analysis was carried out using Pearson Product moment correlation, and t-test analyses.

Analysis Result
Research Question 1
What is the relationship between student's test anxiety and level of academic performance?

Table 1 *Relationship between student's test anxiety and level of academic performance*

Variable	N	X̄	Standard Deviation	df	r	p	Decision
Test Anxiety	400	51.8	3.67				
Academic Performance	254	46.6	4.31	398	-0.83	.041	Reject Ho

$P<0.05$

Table 1 above shows a very high negative correlation between test anxiety and academic performance (r= -0.83, P<0.05). This means that there is a significant relationship between test anxiety and academic performance. The direction of the relationship is negative meaning that as test anxiety level rises, academic performance decrease and vice-versa.

Research Question 2

Is there any significant difference in test anxiety between male and female students?

Table 2: *Comparison of male and female students' Test Anxiety*

Gender	N	X̄	Standard Deviation	df	t.value	t.critical	Remark
Male	146	41.3	3.8				
				398	16.1	1.96	Significant
Female	254	48.2	4.6				

$P<0.05$

Table 2 above depicts t-calculated value =16.1 which is greater than the t-critical1.96 at 0.05 level. This means than the difference between the observed test anxiety of male and female students differ significantly.

Discussions

The observed significant relationship between test anxiety and academic performance is plausible considering the nature of examination itself. Examination being a cognitively task exercise demands that the examinee maintains a relatively stable mind that would enable him/her to maximally utilise cognitive skills. Test anxiety tends to make the individual to be unnecessarily anxious and unstable, thereby reducing possible cognitive functioning and academic performance. The finding of the present study corroborates previous notion that test anxiety creates fear of failure and affects academic performance (Oderinde, 2000). It also lends credence to Maduabum (2001) who noted that test anxiety makes cheating attractive to students and often results into poor academic performance.

The observed difference between male and female students' level of test anxiety is understood in terms of the gender variation in cultural sex roles identity and the non- residential nature of the University.
In most Nigerian societies, the female student is expected to perform more household chores than the male student does. This may mean additional responsibility to the female student who would still have to struggle to keep pace with academic demands. Thus, the male student is likely to have more time to prepare for examinations than the female students are. Inadequate preparation for examinations was identified as a major cause of test anxiety (Oderinde, 2000).

Implications of the Findings

The findings of this study have some implications for improving pedagogy and academic counselling. Teaching should be much more practical and enriched with regular and periodic practical exercises, which students should do at the end of every lecture session. Scores on such practical exercises should constitute substantial part of the final grade. When students are aware of their scores before the semester examination, they may not need to experience unnecessary test anxiety. The findings also have some implications for academic counselling. Anxiety reducing

exercises and effective time management skills could help to reduce test anxiety. The University counselling centre should provide students with necessary orientations on how to reduce test anxiety. Training in examination skills, study techniques and time management should be emphasised in the University counselling programme for students.

Recommendations

The following recommendations are made based focuses on the findings of the study. It is very important that the University Counselling Centre should organise periodic programme to sensitise students about the negative consequences of test anxiety, train them in study skills and encourage them to prepare well for examinations.

Student should learn necessary study skills, prepare well for examinations and learn how to boost self-concept, confidence and morale in order to reduce test anxiety. Also, parents should be enlightened on the need to relief female students of some avoidable chores in order to give them adequate time to prepare for examinations and reduce their test anxiety level.

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217

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