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Research Article

TEST ANXIETY AND ACADEMIC PERFORMANCE OF STUDENTS IN LAGOS STATE SECONDARY SCHOOLS

Olisaemeka, Blessing and Solarin Florence

College of Pharmacy, Mother Theresa Post Graduate and Research in Health Sciences, Pondicherry India

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ABSTRACT

It has always been the concern of educators to improve students' academic achievement. More importantly, the consequences of success or failures of students in schools are far reaching particularly in developing countries like Nigeria. Researchers on students' achievement have investigated human and environmental variables which correlate with higher achievements and could be used to predict future achievements. These efforts have led to the discovery of a category of students who perform excellently well in class work and home assignments but are found to perform below the expected level of achievement when a test or examination is administered on them.

One plausible explanation for the discrepancy is that such students experience high levels of debilitating test anxiety which distract them from task relevant cues and as such, they are not able to retrieve the required information. This study however analyzed the relationship between test anxiety and academic performance among students in secondary schools in Lagos State.

The study found that there is no gender difference in test anxiety level among the students. The study also found no evidence of statistically significant difference in test anxiety among students from high socio-economic status and their counterparts from lower socio-economic status. The study further established that a statistically significant negative relationship exist between test anxiety and academic performance. Finally male and female students did not differ in their levels of test anxiety while low test anxious students performed better than high test anxious students as shown on the findings.

The study therefore recommended that anxiety at a moderate level is healthy for every individual as it has been proven to be a motivating factor. However, excessive anxiety during examination should be reduced because it is counter-productive. It is equally evident from the study that anybody can excel if given adequate opportunity. Therefore the study recommends that the government should provide adequate facilities in schools for effective teaching and learning to take place as these would help build more confidence in students.

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INTRODUCTION

Anxiety behaviour disorder among students has been a focus for study among researchers for some time. Sarason (1979) in his reaction to the phenomenon of test/examination phobia called it "Test Anxiety". He defined it as anxiety expressed over being examined and having one's performance evaluated. The characteristics of test anxiety were identified as feelings of inadequacy, helplessness, heightened somatic reaction, anticipation of punishment, loss of status and low self-esteem. The somatic reaction includes increase in heart beat rate, sweating, muscles tension and nervousness. The above characteristics indicate that test anxiety has a unique nature. In the views of Spielberg (1979), examination is a stressor because it is ego-threatening. In the case of Nigerians, two

factors could be proposed to explain the ego-threatening attributes of examination; these are the uncertainty factors and the consequences of failure factor. The consequence of failure negates the students ego-value needs such as the need for achievement and self-worth. The consequences are further compounded by social pressures and expectations of the society. The embarrassment and shame that would result from the uncertainty factors and consequences of failure would cause what Buss (1980) called social anxiety.

In effect, the possibilities of experiencing symptoms of anxiety make examination stressful. Even though findings abound on the interactive effects anxiety, the relationship between test anxiety and academic performance needs to be properly addressed. It should be glaring therefore that our awareness of

*Corresponding author: Olisaemeka

College of Pharmacy, Mother Theresa Post Graduate and Research in Health Sciences, Pondicherry India

the relationship between these variable would help reach wiser educational decisions.

The issue of the influence of test anxiety on academic performance of students has remained an unresolved argument among educators, psychologists and policy makers. Kiyoo (1988), maintains that examination failure is not restricted to mentally retarded students alone but also to otherwise intelligent students who apart from home and social problems may suffer from personal handicaps such as absenteeism, late-coming, poor study habits, poor attitude during lectures, missing home assignments, poor self-concept, low motivation, lack of persistence or debilitating test anxiety.

Hence, there was a need to carry out an intensive study to know the extent to which test anxiety influences the academic performance of students in Lagos State.

Objectives of the Study

The major aim of this study was to assess the influence of test anxiety on the academic performance of students in Lagos State.

The Specific Objectives are

1. To assess the relationship that exists between the level of anxiety of students and the academic performance.
2. To determine the extent to which economic status influence the anxiety level of students in Lagos State.
3. To assess the relationship among gender, anxiety and academic performance of students.

Research Questions

In specific terms, this study was designed to address and find answers to the following research questions:

1. To what extent does the level of anxiety determine the academic performance of students in Lagos State?
2. Would economic status influence the anxiety level of students in Lagos State?
3. What is the degree of relationship that exists among gender, anxiety and academic performance of students in Lagos State?

Research Hypothesis: The following hypothesis will guide the study.

Hypothesis 1: There will be no gender difference in the anxiety rating among secondary schools students in Lagos State.

Hypothesis 2: There will be no significant difference in test anxiety among students from low socio-economic status and those from high socio-economic status.

Literature Review

The Concepts of Test Anxiety

Test anxiety refers to a complex of physiological and emotional response to tension or stress resulting from apprehension for upcoming examinations. This state of distress and uneasiness is often marked by sleepiness or sleeplessness, excessive sweating acne breakouts, fever blisters, shakiness, depression, irritability, anger, panic, lack of confidence, helplessness and memory loss. According to McMahan (1976) anxiety is a type of neurosis that has been identified as the root of all neurotic

difficulties. Persons who have phobia, that is, who show unusual fear for examination are always subjected to anxiety.

Anxiety can however be distinguished from fear in that is has no specific stimulus effect with fear, there is a specific threat to the person, but in anxiety the vagueness of its cause has led some therapists to refer to it as “Free – Floating” which means that it is not attached to anything specific which the person can identify. Test anxiety is therefore induced by examination or evaluation task (Okoh 1995).

Causes of Test Anxiety

Most test anxiety is caused by under preparedness. Omoluabi (1989) advanced that test anxiety has been linked with various factors such as the uncertainty factors and consequences of failure, self doubt on the part of students, degree of stress and disgrace placed on failure as well as the attitude of teachers. Core classes or intense programs of study in which grades below a certain level cause dismissal from the program can have disastrous effects on students test performance. Likewise, teachers who use tests as the only means of evaluation of performance cause intensive anxiety among those students who are not good test-takers.

Apart from the behaviourist’s view which see anxiety as a learned reaction, there is also the Freudian school of thought that developed the theory that anxiety arises when the memories of certain childhood experiences or emotions are so intolerable that they are repressed or forced from the person’s consciousness. They argue that anxiety was first experienced at birth when the protected luterine environment is disturbed and the helpless infant is subjected to the outside world incapable of satisfying through his own efforts those needs that were automatically met before.

Effects of Anxiety

There are three ways in which test anxiety may affect individuals, namely.

Physiologically: Here the students experience any of these bodily changes – perspiration, rapid heartbeat, muscle tension, sweaty palms, stomach upset, headache, dry mouth and uneasiness, (Gaundry & Spielberger 2001).

Behaviourally: Sarason (1978) opined that when the level of anxiety becomes distressing, learning is definitely impeded. The student creates his own problem by processing too many information thereby making the job of processing task-relevant information complicated by maladaptive personalized feedback like “what if I don’t pass”? The result may be also be-difficulty in reading and understanding, difficulty organizing thoughts, difficulty retrieving words/concepts and having mental blocks.

Psychologically: Test anxiety causes – feeling apprehensive, uneasiness, self doubt, feeling upset.

METHODOLOGY

Population of the study: The study covered all the 517Secondary Schools in Lagos and all the students totaling 564,758.

Sample and sampling technique: A sample size of 150 students was selected for the study. Multistage sampling technique was employed in the selection of respondents. First,

stratified sampling technique was used to select students according to the six Education District. Simple random sampling technique was used to select 3 districts and a school was randomly selected from each of the 3 district. Finally, simple random sampling technique was also used to select 50 students (25 males and 25 females) from each of the 3 schools used for the study. This gave a total of 150 students.

Research Instruments: Three research instruments were used. These are Test Anxiety Inventory (TAI) by Spielberger (1980) to measure anxiety proneness in tests, examinations and evaluative situations. The 20 – item inventory is designed to assess the three components of test anxiety namely-worry, emotionality and total anxiety.

For the assessment of academic performance, Mathematics Achievement Test (MAT). which is a teacher-made test based on the senior secondary school class two syllabus in Mathematics by the Nigeria Educational Research was used. For the socio-economic status, a simple questionnaire was used to separate those whose parents earn 150,000(high socio-economic status) and above from their other counterparts whose parents earn below 150,000 (low socio- economic status).

Statistical Technique: The data collected were analyzed through the use of Pearson Produce Moment Correlation and T-test. Simple percentages and frequencies were also used.

RESULTS

Research Question 1: To what extent does the level of anxiety determine the academic performance of students in Odogunyan Senior Grammar School?

Table 1 Anxiety and Academic Performance of Male Students

Number	Group	Category	Percentage	Achievement
1	10 – 19	High points	14.67%	0 – 39marks
1	20 - 25	Normal points	24%	40 – 59marks
4	35 and above	Low points	61.33%	60 – above
7	5		100%	

Table 2 Anxiety and Academic Performance of Female Students

Number	Group	Category	Percentage	Achievement
1	10 – 19	High points	14.67%	0 – 39marks
2	20 - 25	Normal points	26.67%	40 – 59marks
4	35 and above	Low points	58.66%	60 – above
7	5		100%	

From the table I, 11 students fell into the high point category. This represents 14.67% of the number of male respondents. A total of 18 students fell within normal point category. They represent 24% of male respondents while 46 students fell within low point category and they represent 61.33% of the respondents. The ranges of their performance are equally shown.

Table 2 shows that 11 students fell on the high point category. This represents 14.67% of the female respondents. A total of 20 students fell on the normal point category and this represent 26.67% of respondents, while 44 students fell within the low point category and this represent 58.66% of the respondents. The table also shows the range of their performance.

Research Question 2: Would there be any difference in the anxiety of students from both high and low socio-economic status in Lagos State?

Table 3 Economic Status and Anxiety of Students

Parent Income	Status	No of Students	Percentage
150,000 and above	High economic status	63	42%
Below 150,000	Low economic status	87	58%
		150	100%

Table 3 shows the extent of difference in anxiety of students from both high and low socio-economic status of students in Lagos State. 63 students who belong to high economic group represent 42% of the total respondents while 87 students who belong to low economic status group represent 58% of the respondents.

Research Question 3: What is the degree of relationship that exists among gender, anxiety and academic performance of students inLagos State

Table 4 Degree of relationship that exists among gender, anxiety and academic performance

Male	Female	Total	Anxiety	Achievement	Percentage
1	1	2	High point	0 – 39	14.67%
1	8	9	Normal point	40 – 59	25.33%
4	6	10	Low point	60 – above	60%
7	5	12			100%

Table 3 shows the degree of relationship among gender, anxiety and performance.

The degree of performance of 22 students within the high point category of anxiety is 14.67%. The degree of performance of 38 students within normal point of anxiety is 25.33% while the percentage degree of performance of 90 students with low point of anxiety is 60%.

Hypothesis Testing

Hypothesis 1: There will be no gender difference in the anxiety rating among students in secondary schools.

Gender Difference in test anxiety levels among secondary school students.

Groups	N	X	S D	T.Cal	T.Critical
Male	7	9.48	2.44	3.14	1.96
Female	7	8.16	2.74		

Table 3 shows the correlation between gender difference in test anxiety.

The male subjects obtained a mean of 9.48 (SD = 2.44) as against a slightly lower mean value of 8.16 (SD 2.74) obtained by their female counterparts, thereby yielding a mean difference of 1.32 between the two groups on test anxiety. The T-test comprises of the equality of the means yielding a T-value of 3.41, which is higher than the T-critical value of 1.65, given 148 degrees of freedom at 0.05 level of significance. This therefore led to the rejection of the null hypothesis, as it has show that there is a significant gender difference in test anxiety ratings among secondary school students.

Hypothesis 2: There will be no significant difference in test anxiety among students from low socio-economic status and those from high socio-economic status.

Table 2 Correlation between Test Anxiety and Socio-economic status among the students

Group	N	X	SD	T.Cal	T.Critical
Students from high socio-economic status	63	17.76	4.30	14.92	1.96
Students from low socio-economic status	87	8.66	2.73		

DF = 148, Significant level $P < 0.05$

Table 2 shows the correlation between test anxiety and socio-economic status among the students.

The students from high socio-economic status obtained a mean of 17.76 (SD = 4.30) as against a significant lower mean value of 8.66 (SD = 2.73) obtained by their counterparts from lower socio-economic status, thus yielding a mean difference of 9.1 between the two groups on test anxiety. The T-test comparison yielded a calculated T-value of 14.92, which is higher than the T-critical table value of 1.65, given 148 degree of freedom at 0.05 level of significance. Based on the above, it became evident that a statistically significant difference exists in test anxiety among students from high socio-economic status and their counterparts from low socio-economic status. The null hypothesis is therefore rejected.

DISCUSSION OF RESULTS

This study reveals that students whose anxiety level is very low perform better academically. It was clearly discovered in this study that the higher the level of anxiety of the students, the lower they perform academically. This supports the findings of Sarason *et al* (1964), who found that test anxiety and academic performance were negatively correlated indicating that high anxiety was associated with poor academic performance. The result also supports the findings of Hambree (1988) which maintained that in academic achievement or evaluative situations, lower levels of self-efficacy are related to both higher test anxiety and greater decrements in task performance. The study also found that students from low socio-economic status experience significantly higher test anxiety than their counterparts from high socio-economic status. This supports Harrell (1976) observation that poverty, harsh living conditions coupled with quarrel between parents and siblings are characteristic of families from low socio-economic class. Bakare (1987) identifies these characteristics as probable sources of fear and anxiety in the family status of a child which affect his or her level of adjustment. This will show itself in poor academic performance and deviant behaviours. It was also discovered in the study that male and female students are different in test anxiety hence, they difference in their percentage rating. These findings seemed to contradict the observations of Betz (1977) and Hendel (1980) who stated that test anxiety was more likely to occur among females than males.

Recommendations

Lagos State Ministry of Education should design programmes for students where they will be mentally prepared to realize that examination is inevitable and also to realize the goals involved. For achievement to be meaningful students should be encouraged to develop positive attitude to work and the development of self confidence. Students should be prepared for examination not merely in terms of subject matter, but in term

of psychology of test taking. Topics like using answer sheets, comprehending test directions or instructions and the act of preparing for examination can be thoroughly discussed.

An alternative or complementary approach in dealing with poor performance and test anxiety is to increase the sophistication of the evaluative process, whereby tests will only be one of the many components of evaluation. others being classroom contributions, writing of papers, independent study and reports, contribution to group projects, class attendance and the like. In this light, evaluation should be made to take care of all the three domains of human development so that the fear of total failure which leads to anxiety may be removed. Other measures that can be used in order to reduce test anxiety include; reducing the emphasis on paper qualifications in favour of performance or output and recognizing information processes of evaluation. Schools should try to space examinations to reduce work-load of students and to also reduce unnecessary anxiety. Finally, policy makers in education sector, all stake holder-teachers and counselors should be actively involved in improving the study skills of students. Emphasis should also be on efficient use of time.

CONCLUSION

In the study, the relationship between anxiety and academic performance was investigated. The study found that a significant negative relationship exist between anxiety and performance. No significant gender differences were observed between male and female students. it was also found that coming from low socio-economic background triggers off high level of anxiety in students thereby making it difficult for them to perform maximally as a result of low self-concept.

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