

Influence of Gender on Test Anxiety, Academic Motivation and Academic Achievement among Universities Students in North – West Zone, Nigeria

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Abstract:- This study examined differences of Test Anxiety, Academic Motivation and Academic Achievement among Male and Female Universities Students in North – West Zone, Nigeria. The study adopted survey research design. The target population of the study were sixteen thousand eight hundred and fifty-five (16,855) undergraduate students. The sample of the study were 378 participants drawn from 300 level students across the three selected university in the north-west zone. Data was collected using Test Anxiety Inventory (TAI) and Academic Motivation Inventory (MI). Both instruments were faced and content validated and had reliability .804 for test anxiety while academic motivation had a reliability of .821 respectively after pilot testing. The data collected was processed and analyzed using descriptive (frequencies, mean and standard deviation) and inferential statistics (T-test Independent). All tests were done at 0.05 alpha level of significance. The finding shows that there is no significant differences between test anxiety, academic motivation and academic achievement, test anxiety male and female $p= 0.185$, motivation male and female $p= 0.073$, academic achievement male and female $p= 0.960$. From the results it was recommended Psychologist and counsellors should be able to distinguish the dissimilarities between male and female students in their test anxiety in addressing each of the students appropriately in order to improve their academic achievement. Psychologist and counsellors should be able to distinguish the differences between male and female students in their academic motivation and manage each group of under graduate students appropriately.

Keywords:- Test Anxiety, Academic Motivation and Academic Achievement of Male and Female Universities Students.

I. INTRODUCTION

Test anxiety is a devastating sensation and suffering among the students around the world. It is a type of performance difficulty just like when some people get worried speaking to large crowds or trying something different. Test anxiety can be a devastating problem for many college and university students, because it may weaken their academic achievement and well-being in the

long run. According to (Porto 2013), test anxiety produces mental indicators that build up in students before a test which include restlessness, unusual body movements, and difficulty in concentration, insomnia, fatigue, muscles contraction, abdominal pain and tremor (Parviz & Alemi 2010). A certain amount of test anxiety keeps us energized, motivated, alert and focused but too much of test anxiety can result in emotional or physical distress, difficulty in concentration and emotional worry, which may influence the academic achievements and professional growth negatively. Test anxiety is a psychological, and behavioural responses that accompany concern about possible negative consequences or failure on an exam or similar evaluative situations. (Takahashi 2015) defined test anxiety as the “reaction to stimuli that are associated with an individual’s experience of testing or evaluative situations”. (Roy 2013) views test anxiety as a trait, relatively stable personality characteristics that prompts an individual to react to threatening situations with sometimes debilitating psychological, physiological and behavioural responses. According to him, among these responses, the psychological effects on attention and memory have received much attention.

Several researchers explored gender differences with respect to test anxiety and found that females have higher levels of overall test anxiety than males (Cassady & Johnson, 2002). Cassady and Johnson, (2002) explained “that one explanation for differences in test anxiety on the basis of students’ gender is that males and females feel same levels of test worry, but females have higher levels of emotionality”. Zeidner (1998), on the basis of his research, concluded that difference in test anxiety scores of male and female is due to gender difference in scholastic ability. It is quite evident from the arguments given above and results of the studies reported that text anxiety affects achievement along with other variables such as motivation to learn, ability to benefit from formal instruction and gender. This diversification of effects of text anxiety lead researchers to think of text anxiety as at least bi-dimensional construct (Cassady & Johnson, 2002) with affective and cognitive components.

María and Roser, (2016), examine the Gender differences in test anxiety and their impact on higher education students’ academic achievement, University of

Barcelona, Spain. Test anxiety has detrimental effects on the academic performance of many university students. Moreover, female students usually report higher levels of test anxiety than do their male peers. The present study examined gender differences in test, trait, and math anxiety among university students, as well as differences in their academic achievement. Participants were 168 students from the University of Barcelona, all of whom completed measures of test anxiety, math anxiety, and trait anxiety. They were also asked about their expected level of anxiety when faced with four specific test situations: multiple-choice, open-question, oral presentation, and an exam involving calculations. At the end of the course in which they were enrolled, students were assessed through a multiple-choice and an open-question exam. Compared with their male counterparts, female students reported higher levels of test, math, and trait anxiety, as well as greater expected anxiety in three of the four test situations considered. However, females did not show lower academic achievement than male students in either the open-question or the multiple-choice exams.

Test anxiety is basically a strong emotional reaction that an individual experiences before, during and after an examination (Akca 2011). Usually, situations where individuals are allowed personal evaluation is termed an evaluative situation, which will potentially result in performance efforts geared towards high standards that lead to high levels of performance. Test anxiety can be defined as a significantly unpleasant experience of worry and emotionality during situations where an individual feels he or she is being assessed. Test anxiety is an important factor which has been shown to reduce psychological well-being as well as seriously hinders students' academic achievement (Putman 2012). It is considered to be a common educational problem whereby many students experience nervousness before, during or after an examination, do not feel confident about their abilities. Anxiety although, may be a powerful motivator if it is moderate otherwise may lead to poor performance and interfere with their learning, depressed self-esteem, cheap determination and damage of motivation for school tasks.

Academic motivation is a student's desire (as reflected in approach, persistence, and level of interest) regarding academic subjects when the student's competence is judged against a standard of performance or excellence (Wigfield & Eccles, 2002). Academic motivation is a general construct of effectance motivation, which is defined as the need to be successful or effective in dealing with one's environment (Gresham, 1988). Motivation is a state in which one is excited from 'within' by needs, motivations, aspirations, desires or motives for a particular behaviour directed toward achieving a goal, which acts as an external stimulus to the behaviour (Petz, 2005). Motivation directly or indirectly affects the process of learning and teaching, and is one of the important elements in the development of students' achievement and education.

Intrinsic (internal) motivation is a need arisen from internal impulses which are not caused by external influences, and the only reward inherent to intrinsic motivation is the pleasure of learning, cognition, development of knowledge and skills, encouraged by personal interests. Strengthening the intrinsic motivation leads to higher student achievement, greater creativity and flexibility of thinking and better long-term memory. Variable intrinsic motivation can be encouraged by certain social atmosphere. There are three basic psychological needs associated with intrinsic motivation: the need for autonomy, defined as the self-regulation of personal behaviour (Soenens & Vansteenkiste, 2007) the need for competence as a necessity the success and the control of our own environment and the need for coherence, that is, a sense of belonging to a particular social group. On the other hand, the negative impact on the intrinsic motivation have all expected material rewards and all forms of external control, such as deadlines, surveillance, threats, which are invasive of the personal autonomy, the primary curiosity and desire for challenge (Deci & Ryan, 2000).

Extrinsic (external) motivation is influenced by external factors, various forms of incentives, such as awards, praises, reviews, progress in work and others for example, which impact the development of motivation (Rheinberg, 2004). The social responsibility context encourages not only intrinsically motivated activities, and the question of the degree of personal satisfaction in completing these activities is explained by the concept of internalization. Internalization is an active natural process within socialization through which an individual transforms social rules and expectations of self-worth. There are four basic stages to extrinsic motivations: external regulation (avoidance of sanctions), introjected regulation (discomfort with the environment), identified regulation (acceptance of environmental rules as one's own) and integrated regulation (activity for a particular purpose). The division implies a certain degree of internalization: pure extrinsic motivation is the external regulation, and the integrated regulation implies that a certain external goal is recognized as important for personal growth and adopted as an internal goal. The integrated regulation is the closest to the intrinsic motivation, but it is considered to be a form of extrinsic motivation, because the actions are aimed at achieving a particular goal, and not arising from the inner satisfaction. A motivation is strongly and negatively related to educational outcomes (Vallerand & Bissonnette, 1992). A motivation involves not having a motive to act (Williams & Deci, 1996). A motivation takes the lack of motivation and the observation of the individual's inability to sense the conditions between his or her actions and consequences as reference (Ratelle, Guay, Vallerand, Larose, & Sene'cal, 2007). A motivation occurs when individual students cannot get positive feedback regarding their performance or believe that they have failed on a repetitive basis. According to the revised theory of helplessness, non-contingent environments lead to a motivation. A motivation results when one perceives oneself as incompetent to reach intended outcomes (Deci & Ryan, 1985).

Academic achievement is the attainment obtained by a child in the lesson taught, which may include experience, knowledge, skill and the likes. The knowledge and skill are measured in student's CGPA, the child good or poor performance does not depend solely on attribute the child is born with, but his family background, social contacts, teachers and over role climate in his school and assessment procedure. Academic achievement may be defined as excellence in all academic disciplines, in class as well as co-curricular activities. However, excellence in sport activities, communication skills, punctuality, arts, culture, and the likes, which can be regarded as good performance only when an individual is well adjusted and motivated.

Cohen and Garcia (2006) define academic achievement as "Knowledge attaining ability or degree of competence in school. Task usually measured by standardized test and expressed in a grade or unit based on students' performance/ achievement". (Cohen and Apfel 2009) Define academic performance as "the knowledge obtained or skill developed in the school subjects usually designed by the test scores or marks assigned by the teacher. (Pekrun and Elliot 2009) defined academic achievement as both curricular and co-curricular performance of student. It indicates the learning outcome of the student. The university student perform their potential efficiently, as a result of it learning takes place: the learning outcome changes the behaviour pattern of University Students through different courses and subjects.

Success of student in the classroom and university takes a vital part in the academic progress of the students. Parents, teachers and school administrators alike take understanding of the academic wellbeing of the students. Yardsticks are set by school authorities to quota presentation of the study, the usual performance average set by the university will define whether a student has accomplishments or not. In the valuation of performance, (Pekrun and Elliot 2006) argued that achievement is the behaviour of an individual that can be assessed nonstop by another individual. Therefore, academic achievement has been seen as a term used for student based on how well they are doing in studies and classes. This explanation tends to address academic achievement as the conclusion of all the happenings of the student in the school. Academic achievement of students' university student can also be examine as the amount to which a student has achieved his educational goals. This means that, the student academic performance is measured by the extent to which a students can reached the instructive goal they has previously put in place. The higher institution measures academic achievement in numerous ways which include continuous assessment test C.A.T. and a number of standardize test and examination. By this method, areas of strengths and weaknesses are in students' academic performance determined and estimated in order to advance on the learning process of the student (Pekrun & Parry, 2007).

➤ *Statement of Problem*

So many factors were identified as influential to students' academic achievements which include test anxiety, academic motivation, home background, personality and intelligence, parents socio – economic standing, social environments and societal norms, while poor physical, psychological and social aspect of school environments may have effects on academic achievements of students. Test anxiety among university students can be a function of many factors which include fear, worry of not performing well VIS – VIS expectation of parents, teachers, counselors and peer groups among others. Consequently, the goals of university can be jeopardized. However, teaching staff, students and other stakeholders are to work hard in providing school atmosphere to stimulate good academic achievement of students.

Therefore, there is the need to establish a qualitative social and motivating environment, where there is collective responsibility and effective interpersonal relationship in the schools. However, test anxiety and academic motivation measures such student academic achievement, teacher-student relationship, and students' relationship amongst themselves are becoming poorer by the day which can be as a result of level of anxiety, tension created by insecurity state of the nation and the university in particular. This situation can in turn have effect on students' academic achievement especially at universities where level of collectiveness and cordial academic relationship are to be created so as to enhance learning among students. Therefore, this study sought to find out the Relationship of Test Anxiety, Academic Motivation with Academic Achievement among Male and Female universities Students in North – West zone, Nigeria.

➤ *Objectives*

The following objectives are formulated to guide the study:

- i. To determine the difference between Male and Female students in their Test Anxiety in North-West Zone universities, Nigeria.
- ii. To determine the difference between Male and Female students in their Motivation in North-West Zone universities, Nigeria.
- iii. To determine the difference between Male and Female students in their Academic Achievement in North-West Zone universities, Nigeria.

➤ *Research Questions*

The following research questions were answered in this study:

1. What is the difference between Male and Female students in their Test Anxiety in North-West Zone universities, Nigeria?
2. What is the difference between Male and Female students in their Motivation in North-West Zone universities, Nigeria?
3. What is the difference between Male and Female students in their Academic Achievement in North-West Zone universities, Nigeria?

➤ *Research Hypotheses*

The following research hypotheses are formulated to guide the study:

1. There is no significant difference between Male and Female students in their Test Anxiety in North-West Zone universities, Nigeria.
2. There is no significant difference between Male and Female students in their Academic Motivation in North-West Zone universities, Nigeria.
3. There is no significant difference between Male and Female students in their Academic Achievement in North-West Zone universities, Nigeria.

II. METHODOLOGY

This research employed survey design to determine the metamorphoses between male and female on test anxiety, academic motivation and academic achievement of universities students in North-west zone, Nigeria. This design according to Statt (2000), is a form of descriptive research undertaken when dealing with systematic collection of data or information from a population through the use of personal interview, opinion, scale, questionnaire and observation.

The population of this study is made up of sixteen thousand eight hundred and fifty-five (16,855) 300 level students of the three universities, namely: Ahmadu Bello University, Zaria, Federal University Duste Jigawa State and Usmanu Danfodiyo University, Sokoto. The sample of this study is 378 male and female students of the three selected Univeritiers, namely: Ahmadu Bello University Zaria, Federal University Duste Jigawa, and Usmanu Danfodiyo University, Sokoto. This sample is drawn from the entire

population of all 300 levels students. The selection conforms to the Research Advisors (2010) prescription as attached in the appendices of this research.

Two main instruments were used for this study. The instruments are test anxiety and academic motivation inventory. The instrument is comprised of three sections. Section (A) Biographic Data of the Students, section (B) test anxiety, section (C) academic motivation Inventory, were used to correlate with academic achievement (CGPA) of students respectively. Both test anxiety and academic motivation inventory are adapted from Taylor (2002) test anxiety inventory And Heater, (1981) academic motivation inventory. Test Anxiety Inventory consists of 15 items. It has five points scale consisting of strongly agreed (SA), Agreed (A), Not Sure (NS), Disagreed (D), Strongly Disagreed (SD) which represent students’ feelings. The scoring guide for test anxiety are <29 -mild test anxiety, 30-59- moderate test anxiety and 60-100 severe test anxiety. Academic Motivation Inventory also consists of 15 items. It has five points scale ranging from strongly agreed (SA), Agreed (A), Not Sure (NS), Disagreed (D), Strongly Disagreed (SD) which represent students’ feelings. The data collected were analyzed using descriptive and inferential statistics. Independent T – test was used to test the hypotheses. The hypotheses were tested at 0.05 alpha level of significance. SPSS version 25.0 were used for data analysis and storage.

III. RESULTS

- *Hypothesis One: There is no significant difference between Test Anxiety of Male and Female students in North-West Zone universities, Nigeria.*

Table 1: Independent; t test statistics on difference between Test Anxiety of Male and Female students in North-West Zone universities, Nigeria.

Variable	Group	N	Mean	SD	Mean diff	df	t computed	p
Test Anxiety	Male	310	59.73	4.57	0.83	371	1.327	0.185
	Female	63	58.90	4.31				

$P = 0.18 > 0.05, t_{computed} = 1.327 < 1.96 \text{ at } df \ 371$

The Independent t-test statistics of the above table showed that there is no significant difference between Male and Female students in their test anxiety North-West Zone Universities, Nigeria. This is because the calculated p value of 0.185 is greater than the 0.05 alpha level of significance and the computed t value of 1.327 is lower than the 1.96 t critical value at df 371 The descriptive statistics showed that the computed Mean Test Anxiety values are 59.73 and 58.90 by male and female students respectively. Therefore, the

null hypothesis which states that there is no significant difference between Male and Female students in their test anxiety in North – West Zone universities, Nigeria, is hereby accepted and retained.

- *Hypothesis Two: There is no significant difference between Academic Motivation of Male and Female students in North-West Zone universities, Nigeria.*

Table 2: Independent; t test statistics on change between Academic Motivation of Male and Female students in North-West Zone universities, Nigeria.

Variable	Group	N	Mean	SD	Mean diff	df	t computed	p
Academic Motivation	Male	310	58.26	5.923	1.444	371	1.795	0.073
	Female	63	56.82	5.23				

$P = 0.073 > 0.05, t_{computed} = 1.795 < 1.96 \text{ at } df \ 371$

The Independent t test statistics above showed that there is no significant difference between Male and Female students in their academic motivation in North-West Zone Universities, Nigeria. This is because the calculated p value of 0.073 is greater than the 0.05 alpha level of significance and the computed t value of 1.795 is lower than the 1.96 t critical value at df 371 The descriptive statistics showed that the computed Mean Motivation values are 58.26 and 56.82 by male and female students respectively. Therefore, the

null hypothesis which states that there is no significant difference between Motivation of Male and Female students in North-West Zone universities, Nigeria, is hereby accepted and retained.

➤ *Hypothesis Three: There is no significant difference between the Academic Achievement of Male and Female students in North-West Zone universities, Nigeria.*

Table 3: Independent; t test statistics on difference between Academic Achievement of Male and Female students in North-West Zone universities, Nigeria.

Variable	Group	N	Mean	SD	Mean diff	df	t computed	p
Academic Achievement	Male	310	2.9092	.73395	0.005	371	0.050	0.960
	Female	63	2.9143	.76134				

$$P = 0.073 > 0.05, t_{computed} = 1.795 < 1.96 \text{ at } df \ 371$$

The Independent t-test statistics above showed that there is no significant difference between Male and Female students in their academic achievement in North-West Zone Universities, Nigeria. This is because the calculated p value of 0.960 is greater than the 0.05 alpha level of significance and the computed t value of 0.050 is lower than the 1.96 t critical value at df 371 The descriptive statistics showed that the computed Mean Academic Achievement values are 2.90 and 2.91 by male and female students respectively. This shows that both male and female have the same level of mean Academic Achievement. Therefore, the null hypothesis which states that there is no significant difference between Academic Achievement of Male and Female students in North-West Zone universities, Nigeria, is hereby accepted and retained.

Academic Achievement of universities students in North West Zone, Nigeria. The result of this study disagrees with that of Zembor and Blume (2011) who stated that girls rather than boys achieve better in schools.

IV. DISCUSSIONS

The finding of this research shows that there is no significant difference between male and female in their Test anxiety among undergraduate students in North West Zone universities in Nigeria. The finding disagrees with Yousefi, Talib, Mansor, Juhari, and Redzuan (2010) investigated the relationship between test anxiety and academic achievement among Iranian Adolescents. The result revealed that there is a significant difference ($t= 5.47, p=.000$) of academic achievement between male and female adolescents whereby female score higher in their academic achievement.

V. CONCLUSION

The finding of this study revealed that there is no significant difference between male and female in their test anxiety, academic motivation and academic achievement.

RECOMMENDATIONS

1. Psychologist and counsellors should be able to distinguish the differences between male and female students in their test anxiety in addressing each of the students appropriately in order to improve their academic achievement.
2. Psychologist and counsellors should be able to distinguish the transformations between male and female students academic motivation and to manage each group of under graduate students appropriately.
3. Psychologist and counsellors should be able to distinguish the differences between male and female students in their academic achievement and encourage them to improve in their academic activities for better outcome.

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