

**RELATIONSHIP BETWEEN TEST ANXIETY AND
PERFORMANCE IN EXAMINATION OF STUDENTS IN
BASIC NURSING SCHOOLS IN ENUGU URBAN, ENUGU STATE**

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PG/M.Sc/08/47815**

**M.Sc DISSERTATION SUBMITTED TO
DEPARTMENT OF NURSING SCIENCES
FACULTY OF HEALTH SCIENCES AND TECHNOLOGY,
UNIVERSITY OF NIGERIA, ENUGU CAMPUS**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
AWARD OF DEGREE: MASTER OF SCIENCE NURSING
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TITLE

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**IN PARTIAL FULFILMENT FOR THE AWARD OF MASTERS OF
SCIENCE DEGREE IN NURSING
(NURSING EDUCATION)**

SUPERVISOR (DR.) MRS. NGOZI P. OGBONNAYA

JULY, 2014

APPROVAL

This Dissertation titled **óThe Relationship between test anxiety and Performance in Examination of Students in Basic Nursing schools in Enugu Urbanô** was originally the work of Irene Ifeyinwa Obi-Okonkwo with Registration Number PG/M.Sc/08/47815 of the Department of Nursing Sciences, Faculty of Health Sciences and Technology, College of Medicine, University of Nigeria, Enugu Campus.

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CERTIFICATION

This is to certify that this dissertation is the original work of Irene Ifeyinwa Obi-Okonkwo Registration Number PG/M.Sc./06/47815. I certify that the original work is mine except as specified in acknowledgment and references and that neither, the dissertation nor the original work contained therein has been submitted to the University or any other Institution for the award of Degree.

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DEDICATION

This project is dedicated to my late father Pa David Okolo who made sure I had tertiary education despite his meagre resources and competing demands.

I owe my life and education to him. May his gentle soul continue to rest in the bosom of the Lord.

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ABSTRACT

Test anxiety is conceived as the hyper-arousal condition that results in physiological, emotional and intellectual changes that prevent the effective use of the previously learned information while taking an examination. It is composed of 'worry' which is a cognitive anxiety related with performance and 'emotionality' the arousal of autonomic nervous system in evaluative situations (Morris & Liebert 1970 in Ndirangu 2009). Examination performance is the grade point or scores obtained following examination. It is synonymous with academic performance. The purpose of the study was to determine the relationship between test anxiety and examination performance of Basic Nursing Students in Enugu Urban. The correlation study design was used. The study was carried out among 140 PTS students of school of UNTH and School of Nursing ESUTH comprising 63 students from UNTH and 77 from ESUTH. Sarason's test anxiety instrument was used to collect data on students test anxiety and published PTS results used for data on examination performance. The result showed that there is an inverse relationship between test anxiety and examination performance of the students $r = -.20$, $N = 140$ $P = .02$. It was also established that students with mild test anxiety had better examination performance than those with moderate test anxiety. The results also showed no significant difference in the test anxiety levels between Schools. The major educational implication is that high anxiety will lead to poor examination performance while mild and moderate anxiety levels will give good examination performance. It is recommended that a curriculum that is inclusive of strategies of coping with test anxiety be developed.

CHAPTER ONE

INTRODUCTION

Background to the Study

Test and testing are part of all educational programmes. In basic nursing school classroom content is complex, the scope is broad and the pace is accelerated. Frequent testing of students is necessary throughout the programme for evaluation of progress in mastering content. Also at the end of planned instruction, preliminary training stage (PTS), junior block, intermediate block, students are given examinations. Their performance in such examinations is used to make decisions that impact on the students. Examination performance thus is an important issue for the students. Students finishing their PTS verbalize and exhibit a great deal of anxiety regarding PTS examinations.

Anxiety is one of those emotional components of human life; it is a basic human emotion consisting of fear and uncertainty that typically appears when an individual perceives an event as being a threat to the ego or self-esteem (Sarason, 1988 in Eric Digests 2005). When students develop serious fear of performing poorly in an examination it is termed test anxiety. According to Zeidner (1998), test anxiety is a multidimensional sign that can be described as a group of phenomenological, physiological, and behavioral reactions that occur with possible negative consequences or failure in an examination or similar evaluative situation.

Test anxiety especially worry has impact on academic performance and working memory (Eysenk, 2001). There are two major tasks for students who find themselves under test condition. One is to be able to cope positively with that feeling of unpleasantness and uncertainty brought about by test and similar situations. The other is to live up to expectation of the test by performing well. Most students might study hard to pass tests but might not be able to overcome or resolve the conditions they find themselves in during examinations such as test anxiety.

Examination performance is the grade point average or score obtained following an examination. This is often expressed in percentage e.g. (50%) or in letters e.g.

A, B etc. There are many factors that affect examination performance; one of these is test anxiety. Researchers estimate that 20 to 30 percent of American students experience test anxiety (Strauss, 2012).

Some research works carried out in Nigeria have shown that our students in primary, secondary and higher institution experience test anxiety (Ebigbo, 1982 in Akubuiroh, 1990). Although Kalu (1980) and Akubuiroh (1990) did some work on the relationship between test anxiety and examination performance, it has been long. No recent major work has been done to show whether the level of test anxiety (high, moderate or low) relate significantly to examination performance (high, moderate or low score levels). The focus of this study therefore is to determine the relationship between test anxiety and examination performance.

Statement of Problem

The prevalence of poor academic performance among secondary and tertiary students has been high in Nigeria (Ekundayo, 2010). For the past three years both the senior secondary school certificate (SSCE) results and joint admission and matriculation board results have been poor. For instance in the 2013 SSCE GCE only 29.17% of candidates obtained credits and above in five subjects including English and Mathematics which showed 8% decline over 2012 GCE results. The likely factors were stated to include qualification and experience of teachers, poverty, method of conducting the examination and test anxiety of the students.

In the case of Basic Nursing School, the PTS examination is believed to induce a great deal of anxiety because out of the four papers taken in the examination if a student fails three or four papers he/she will have to discontinue the nursing programme whereas failing two papers will give him/her opportunity to repeat the PTS class for six months and this also means waiting for the next PTS class to come in thus losing one year in the course of study. In the same vein failing one paper will subject the student to re-sitting for that one paper. Only the students who pass all four papers and oral/practical will happily move to the next level.

Also in the Basic Nursing Schools there are cases of nursing students who come in

with good ordinary level grades, participate actively in class work, do their assignments, prepare for examinations and think they have a grip of the course material but on the day of examination some of them blank out and feel so nervous that they cannot respond to those questions they knew the answers the night before (Lyness, 2010).

Most studies focusing on examination performance centred outside the personality construct of the students such as test anxiety. Factors such as teaching methods, experience of the teachers, school and classroom environment and the like have been studied and recommendations made and there is no evidence of improvement. The researcher wondered whether the problem may be associated with test anxiety and that gave impetus to the study.

In addition, contradicting findings in this area have been reported in other countries. Hence the need to investigate the level of test anxiety of students prior to and during examination and see if the test anxiety has any relationship with students' examination performance in basic nursing schools.

Purpose of the Study

This study intends to find out if there is any relationship between test anxiety and examination performance of basic nursing students.

Objective of the Study

Based on the purpose of study the following objectives were set for the study.

1. To determine the test anxiety levels of basic nursing students during examination.
2. To determine the relationship between test anxiety scores and examination performance of nursing students.
3. To determine if there is a significant difference in the test anxiety levels of students in the two schools.

Research Hypothesis

- Ho1:** There is no significant relationship between test anxiety scores and examination performance/scores of basic nursing students.
- Ho2:** There is no significant difference in test anxiety levels of nursing students from UNTH and those of ESUTH.

Significance of the Study

It is hoped that findings from this research will show the levels of test anxiety of nursing students during examination and the relationship between the test anxiety and examination performance.

These findings will help students who have severe anxiety to seek counseling and/or strategies for coping with test anxiety before taking examinations.

Also findings from this research will help nursing educators to understand why many able students fail examinations and exist Nursing programmes. This will enable them implement methods aimed at reducing test anxiety among students.

In addition findings from this work will help Nursing and Midwifery Council of Nigeria inculcate techniques and strategies for coping with test anxiety in the curriculum of basic nursing schools to ensure good examination performance.

Scope of the Study

This study will cover two basic schools of nursing in Enugu urban namely, school of nursing University of Nigeria Teaching Hospital (UNTH) and school of nursing Enugu State University Teaching Hospital (ESUTH) both in Enugu urban. The variables concerned in the present study are Test Anxiety, Examination performance and the relationships between the two.

This study is also delimited to determining the test anxiety scores of the students,

whether there is a relationship between test anxiety score and examination performance and whether there is a difference in the tests anxiety levels of students in the two schools.

The study will also be delimited to the PTS nursing students in the two schools. PTS nursing students were chosen because of the PTS examination which is very anxiety inducing as a certain level of failure will lead to discontinuing the nursing programme.

Operational Definitions

For the purpose of this study, the terms listed below are defined as follows:

Test Anxiety: feeling of distress or nervousness and other emotional symptoms during a test or examination as measured by Sarason Test Anxiety inventory used for the present study. There are three categories of test anxiety.

Mild Test Anxiety: This is test anxiety scores from 40 ñ 79.

Moderate Test Anxiety: This is test anxiety scores from 80 ñ 119.

High/Severe Test Anxiety: This covers scores from 120 ñ 160.

Examination Performance: End of PTS examination scores as published by UNTH and ESUTH.

Nursing Students: PTS students in the school of nursing UNTH and school of nursing ESUTH.

PTS Examination: This is the first examination taken after six months of preliminary nursing training.

Sarason Test Anxiety Scale: Also known as reactions to tests anxiety scale will be used to measure test anxiety in this study.

CHAPTER TWO

LITERATURE REVIEW

This chapter will discuss the literature review of test anxiety and examination performance. There is paucity of literature in this area in Nigeria therefore related areas will be reviewed and presented under following headings:

- Conceptual Review
- Conceptual model
- Review of Related Theories
- Empirical review
- Summary of Reviewed Literature

Concept of Test Anxiety

Anxiety is the state of feeling nervous or worried that something bad is going to happen. It also means a worry or fear about something. Anxiety is a basic human emotion consisting of fear and uncertainty that typically appear when an individual perceives an event as being a threat to the ego or self esteem (Sarason, 1988 in Eric digest 2005). In some instances such as avoiding dangerous situations, anxiety can be helpful. However, when taken to extremes, it may produce unwarranted results. The root meaning of the word anxiety is "to vex or trouble" in either presence or absence of psychological stress, anxiety can create feeling of fear, worry, uneasiness and dread (Bouras and Holt, 2007). One of the most threatening events that causes anxiety in students today is examination. When students develop an extreme fear of performing poorly in an examination, they experience test anxiety. You have participated in the class, done all of your homework, studied hard, and you think you have a grip on the material. But then the day of test comes, suddenly, you blank out, freeze up, zone out, or feel so nervous that you can't get it together to respond to those questions you knew the answers to just last night. If this sounds like you, you may have a case of test anxiety. Test anxiety is that nervous feeling that people sometimes get when they are about to take a test/examination. It is a feeling of agitation and distress. It is often seen as a key player in the test/academic performance of students.

Definition of Test Anxiety

Test anxiety is the hyperarousal condition that results in physiological, emotional and intellectual changes that prevent the effective use of the previously learned information while taking an examination (Ndirangu et al, 2008). It is composed of "worry: which is a cognitive anxiety related with performance and "emotionality" the arousal of autonomic nervous system in evaluative situations. According to Spielberger and Vagg (1995) the test anxiety construct is considered as a situation-specific trait accounting for individual differences in the extent to which people find examination threatening. In the words of DöArcy (2010) test anxiety is actually a type of performance anxiety - a feeling someone might have in a situation where performance really counts or when the pressure is on to do well. For example a person might experience performance anxiety when he or she is about to try out for school play, sing a solo on stage, get into position at the pitcher's mound or go into an important interview. It is pretty normal to feel a little nervous and stressed before a test, just about everyone does. And a touch of nervous anticipation can actually help you get revived and keep you at peak performance while you are taking the test. But for some people, this normal anxiety is more intense. The nervousness they feel before a test can be so strong that it interferes with their concentration or performance.

Zeidner (1998) also referred to test anxiety as a multi-dimensional sign that can be described as a group of phenomenological, physiological and behavioural reactions to appear with possible negative consequences or failure on an examination or similar evaluative situation. Test anxiety especially worry has impact on academic performance and working memory (Eysenck, 2001). Test anxiety is a major factor contributing to a variety of negative outcomes including psychological distress academic underachievement, academic failure and insecurity (Hembree, 1988). The definition of test anxiety can be summed up as a condition in which someone experiences distress emotionally or physically before, during or after taking an examination. A psychologists definition of test anxiety is where in the anxiety gets in the way of the person's performance in school, to the extent of it affecting his/her ability to learn even outside school. To further give the definition of test anxiety, one has to understand its cause.

Causes of Test Anxiety

According to DöArcy (2010) all anxiety is a reaction to anticipating something stressful. Like other anxiety reactions, test anxiety affects the body and mind. When you are under stress, your body releases the hormone adrenaline, which prepares it for danger (you may hear this referred to as the "fight or flight" reaction). That is what causes the physical symptoms, such as sweating, a pounding heart, and rapid breathing. These sensations might be mild or intense. Focusing on the bad things that could happen also fuels test anxiety. For example, someone worrying about doing poorly might have thoughts like, "what if I forget everything I know"? or "what if the test is too hard"? Too many thoughts like these leave no mental space for thinking about the test questions. People with test anxiety can also feel stressed out by their physical reaction and think things like "what if I throw up"? oh no, "my hands are shaking", just like other types of anxiety, test anxiety can cause a vicious circle. The more a person focuses on the bad things that could happen, the stronger the feeling of anxiety becomes. This makes the person feel worse and, because his/her head is full of distracting thoughts and fears, it can increase the possibility that the person will do worse on the test.

Usually there is a real or perceived activating agent. It may be past experience of blanking out on tests or being unable to retrieve answers to questions. If the anxiety is felt before an exam is taken, then the negative experience may have had something to do with the preparation i.e. lack of preparation for an exam which is a real reason to be worried about your performance. In this case time management, poor study habits, failure to properly organize material and cramming the night before the exam might increase anxiety. Thus each time a test/examination would come up, the person feels agitated just with the thought of having to prepare for it. The issue of past experience can be explained in another perspective where a person who had adequately prepared for a major examination, suddenly has a mental block causing him/her to fail. Thus the person ends up fearing major examinations. There are also studies being done to see if the causes of test anxiety can be linked with a genetic factor. As this is considered a

psychological condition, scientists believe that a person's propensity to excessively worry about an examination may have something to do with the genes that are responsible for anxiety threshold. Finally most psychologists, however, tie the cause of test anxiety to a person's self esteem. If a person is an over-achiever, he is likely to suffer from this condition (test anxiety) because of the unreasonable goal he/she has set for himself/herself. He/she feels pressured to perform well in every examination.

People Prone to Test Anxiety

A lot of students nowadays experience test anxiety. Although it would be normal for the average student to feel anxious during exams, there are some individuals who are too nervous that anxiety takes over other bodily functions and gets in the way of one's concentration and performance during the test. Test anxiety is a type of situation anxiety trait where test takers feel anxious or worrisome before, during and after taking an exam. This has nothing to do with how prepared you are for a test, because real test anxiety occurs when you have prepared well for an exam and yet you don't perform well on the test because of your uncontrollable emotions, excessive worrying and the like.

Test anxiety can happen to any one, but it is more common to some students. Test anxiety - the profile of the suffered people usually include **individuals with low self esteem** or for those **who associate getting a high score with self worth**. Specifically, students who are pressured to excel, either for social status or for parents' approval, tend to fit into test anxiety - the profile of the suffered people. This anxiety is fuelled by the fear of failing or fear of being labelled as "stupid". Test anxiety - the profile of the suffered people also **includes gifted and above average students** who often aim for perfection. This arises from "less than perfect" score results. Also some parents of gifted students can sometimes impose high expectations over their children, causing them to feel pressured in getting a higher test score. This makes gifted or above average students, candidates for test anxiety - the profile of the suffered people.

Classification of Test Anxiety

Test anxiety is termed "**anticipatory**" if the distress feeling occurs while studying and preparing for the test or examination. On the other hand, it is labelled as "situational anxiety" when it occurs while taking the test or examination (gwire.gwu.edu/index.gw). Anxiety occurs in a wave, so it will increase the time it is first recognized, come to peak and subside naturally especially when the cause or stressor is removed or is over.

Symptoms of Test Anxiety

In the words of Cherry (About.com) the symptoms of test anxiety can vary considerably and range from **mild** to **severe**. Some students experience only mild symptoms of test anxiety and are still able to do fairly well on exams. Other students are nearly incapacitated by their anxiety, performing dismally on tests or even experiencing panic attacks before or during examinations.

The symptoms that could give the definition of test anxiety can be categorized into four. **The first is the physical symptoms** which include sweating; shaking, rapid heart beat (Palpitation) dry mouth, fainting and nausea. Milder cases of test anxiety can cause a sense of "butterflies" in the stomach, while more severe causes can actually cause students to become physically ill. **Second is emotional**, which include depression, low self esteem, anger and a feeling of hopelessness. Students often feel helpless to change their situation or belittle and berate themselves about their symptoms and poor test performance. **Third is behavioural**, which is when one fidgets, avoids or turns into drugs, or outright avoidance of testing situations in some cases, test anxiety can become so severe that students will drop out of school in order to avoid the source of their fear. Lastly, **cognitive which** is experiencing mental block or feelings of dread. Negative self-talk, trouble concentrating on the test and racing thoughts are also common cognitive symptoms of test anxiety. Zeidner (1998) contends that test anxious students have more difficulty interpreting information and organizing it into larger patterns of meaning.

Test Anxiety Scales

According to American Test Anxiety Association (www.amtaa.org) there are several test anxiety scales. These scales have their benefits and shortcoming. Early scales by authors such as Charles Spielberger tended to focus on psychological and somatic features and on worry commonly referred to as "emotionality", while more recent offerings such as that by Cassady & Johnson emphasize cognitive processes. Test anxiety for these authors consists of physiological and mental processes, and impaired test performance is seen as the result. Some of these scales include:

Spielberger Test Anxiety Inventory

This is the most widely used, and therefore the international standard. It scores items positive and negative, so that left and right response bias does not affect the scoring. The scale picks up worry which impairs performance, but also emotionality, better termed physiological arousal which is only modestly related to impaired performance. It is licensed to users and involves a licensing fee.

Westside Test Anxiety Scale (Richard Driscoll)

This scale focuses strongly on performance impairments, with 6 of 10 items specifically about performance problems. It assesses worry which impairs performance but does not dwell on physiological arousal, which is only loosely related to performance. It is quick to administer and easily scored by the students themselves. Westside anxiety scale includes instructions to help students understand their scores. It has public access as it can be downloaded and used with no charge to the user. Scale changes are found to be closely related to grade changes suggesting that the scale is a sensitive register of anxiety impairments. Items of this scale are all positively scored, making the scale easy to score but vulnerable to left and right response bias.

Cassady - Johnson Cognitive Test Anxiety Scale

This focuses on the cognitive dimension of test anxiety which impairs test performance. it is also known as cognitive test anxiety scale and is a 27 - item measure focused on only the cognitive domain of test anxiety, formerly referred to as worry. In previous investigations of the cognitive test cognitive test anxiety scale, involving over

1000 participants, a reliable method for determining high and low levels of test anxiety has been documented (Cassady, 2001a, 2001b, Cassady & Johnson in Press), which splits respondents into three levels of test anxiety. The low group score ranges from 27 to 61, moderate test anxiety group ranges from 62 - 71 and respondents that score over 72 are categorized as the high test anxiety group (Maximum score possible 108).

Irwin G. Sarason Reactions to Test Scale

This scale measures tension; worry; test irrelevant thinking; and bodily reactions. It is one of the early scales and has been used extensively in research. It is available without charge. It contains 40 items, providing a thorough assessment but requiring more time to complete.

Test Anxiety Inventory Scale

This is a self-report inventory designed to measure test anxiety - as a situation specific personality trait. The test anxiety inventory scale consists of 20 items or statements, and the respondents indicate on a four point likert - type scale how often they experience the feeling described in each statement. The scale provides a measure of two test anxiety components worry and emotionality.

Test Anxiety and Academic Performance

Test anxiety has varied effect on effect depending on the level of anxiety. We have low, moderate and high level test anxiety. Studies have shown that people with low - moderate test anxiety tend to do well in examination or test while those with high test anxiety perform poorly (Yousefi et al., 2010). According to Hembree, (1988 in Eric Digest 2003), test anxiety is a major factor contributing to a variety of negative outcomes including psychological distress, academic underachievement, academic failure and insecurity. Test anxiety has been linked with dropping out of school, substance abuse and depression Cherry (About. com). Also in the words of Zeldner (1990) many students have the ability to do well on examinations but may not do so because of debilitating effect of high levels of test anxiety. This is because of the societal emphasis placed on testing; this could potentially limit their educational and vocational opportunities. Experimental studies of test anxiety have provided evidence

that cognitive interference is an important factor in lowering the performance of highly test anxious people (Sarason, 1984 retrieved January, 2012). In contrast however Heather and April (2009) found that test anxiety has no effect on academic performance. According to Yerkes - Dodson law an optimal level of anxiety (arousal) is needed to best complete a task such as an exam, performance or competitive event. However when the anxiety or level or arousal exceeds that optimum, the result is a decline in performance.

Concept of Test/Examination

A test or examination is an assessment intended to measure a test taker's knowledge, skill, aptitude, physical fitness or classification in many other topics (e.g. beliefs). A test may be administered orally, on paper, on a computer or in a confined area that requires a test taker to physically perform a set of skills.

Definition

According to Oxford Advanced Learners Dictionary examination is a testing of knowledge and ability. Examination generally test a students scholastic achievement, i.e. his proficiency in the subject matter, it provides a situation in which only the objectives of knowledge and to a certain extent, skill are realized. Thesaurus defined test/examination as a series of questions problems or physical responses designed to determine knowledge, intelligence or ability. It is a basis for evaluation or judgment. In further defining test or examination, it is an assessment intended to measure a test-takers knowledge, skill, aptitude, physical fitness, or classification in many other topics (e.g. beliefs) (www. examination and importance. com retrieved February, 2012). According to Bassavanthapa (2003) examination is an appraisal of ability, achievement or present status in any respect and it is an instrument used in making such an appraisal.

Formats of Test/Examination

A test or examination takes a variety of forms such as:

Verbal Format

The individual is given an oral or verbal task such as what is your name.

Written Format

Involves written tasks such as essay examination. This format is also known as paper and pencil and is the most common.

Performance Format

Where the individual is given a task to perform. Here no question is asked rather a particular task is given to the individual to perform and he/she is timed.

Situation Format

Here the individual is put in a situation and is observed to see how he/she behaves in that situation. From there you determine the attributes of that individual. No question is posed.

Tests/examinations vary in style, rigor and requirements. For example, in a closed book test, a test taker is often required to rely upon memory to respond to specific items whereas in an open book test, a test-taker may use one or more supplementary tools such as a reference book or calculator when responding to an item. A test may be administered formally or informally. An example of an informal test would be a reading test administered by a parent to a child. An example of a formal test would be a final examination administered by a teacher in a classroom or an I.Q. test administered by a psychologist in a clinic. Formal testing, often results in a grade or a test score. A test score may be interpreted with regards to a norm or criterion or occasionally both. The norm may be established independently, or by statistical analysis of a large number of participants. Tests may also be classified as standardized and non standardized. A standardized test is any test that is administered and scored in a consistent manner to ensure legal defensibility. (North Central Regional Education Laboratory NCREL.org) standardized tests are often used in education, professional certification psychological the military and many other fields. Standardized tests are usually held on fixed dates as determined by the test developer, educational institution or governing body, which may or may not be administered by the instructor held with the classroom or constrained by classroom period instructor.

A non standardized test is usually flexible in scope and format, variable in difficulty and significance. Since these tests are usually developed by individual instructors, the

format and difficulty of these tests may not be widely adopted or used by other instructors or institutions. A non standardized test may be used to determine the proficiency level of students, to motivate students to study and to provide feedback to students. In some instances a teacher may develop non standardized tests that resemble standardized tests in scope, format, and difficulty for the purpose of preparing their students for an upcoming standardized test. Finally, the frequency and setting by which a non standardized tests are administered are highly variable and are usually constrained by the duration of the class period. A class instructor may for example, administer a test on a weekly basis or just twice a semester. Any test with important consequences for the individual test taker is referred to as a high-stakes test.

Modern Day Use of Tests/Examinations: Education

Some countries such as United Kingdom and France require all their secondary school students to take a standardized test on individual subjects such as the General Certificate of Secondary Education (GCSE) and Baccalaureate respectively as a requirement for graduation "GCSEs: The Official Guide to the system. These tests are used primarily to assess a student's proficiency in specific subjects such as mathematics, science or literature. In contrasts high school students in other countries such as the United States may not be required to take standardized test to graduate rather they take it to apply for a position in a university program and are typically given the option of taking different standardized tests such as the ACT or SAT, which are primarily to measure a student's reasoning skill "About the SAT". High school students in the United States may also take advanced placement tests on specific subjects to fulfil university-level credit. Depending on the policies of the test maker or country, administration of standardized tests may be done in a large hall, classroom or testing centre. A proctor or invigilator may also be present during the testing period to provide instructions, to answer questions or prevent cheating, Grades or test scores from standardized test may also be used by University to determine if a student applicant should be admitted into one of its academic or professional programs. For example universities in the United Kingdom admit applicants into their undergraduate programs based primarily or solely on applicant's grades on pre-university

qualifications such as the GCE A-levels or "Cambridge Pre-U, International Qualification University of Oxford".

In contrast, universities in the United States use applicant's test score on the SAT or ACT as just one of their many admission criteria to determine if applicant should be admitted into one of its undergraduate programs. The other criteria may include the applicant's grade from high school, extra curricular activities, personal statement and letter of recommendations. Once admitted, undergraduate students may be required by their respective programs to take a comprehensive examination as was requirement for passing their courses or for graduating from their respective programs. Test scores of students in specific grades of an educational institution are used to determine the status of that educational institution is whether it should be allowed to continue to operate in the same way or receive funding.

Here in Nigeria standardized tests/examination such as WAEC, Ume (JAMB) and Postume examinations are used to gain admission into the Nigerian universities. In the university continuous assessment inform of quizzes, tests and end of semester exams are required to graduate in various educational and professional programs. Finally, standardized tests are sometimes used to compare proficiencies of students from different institutions or countries for example; the organization for Economic co-operation and Development (OECD) uses Programme for International Student Assessment (PISA) to evaluate certain skills and knowledge of students from different participating countries "PISA" 2011).

Licensing and Certification

Standardized tests are sometimes used by certain governing bodies to determine if a test taker is allowed to practice a profession, to use a job title, or to claim competency in specific set of skills. For example a test taker who intends to become a registered nurse (RN) in the United States is required by a governing body such as commission on graduate of foreign nurses and national licensing board to pass a CGFNS and NCLEX examinations.

Immigration and Naturalization

Standardized tests are also used in certain countries to regulate immigration for example intended immigrants to Australia are legally required to pass a citizenship test as part of that country's naturalization process "Australian citizenship - Australian citizenship test".

Competitions

Tests are sometimes used as a tool to select for participants that have potential to succeed in a competition such as sporting event. For example, serious skaters who wish to participate in figure skating competitions in the United States must pass official U.S. Figure skating test just to qualify.

Group Memberships

Tests are sometimes used by a group to select for their membership. The group need an individual to score at 98th percentile or higher on a standardized, supervised intelligent quotient test to become its member.

Functions of Examination

The overall purpose of test is seen in terms of decisions that must be made. Generally the types of decisions in which tests are used are instructional, selection, placement and personal. While these decisions are common to education and psychology, the purpose of test can be better appreciated by looking at the ways various people connected with test make use of them.

Teachers Use of Examination

All over the world testing has been an integral part of teaching-learning process. Testing commences from the risk time the teacher meets with his students. The functions of tests/examinations are summarized thus Examinations are used to assess knowledge or information concerning the students' entry behaviour. The importance of readiness for learning is a well accepted fact, thrust to teach effectively the teacher must find out where the student is an start from there. Teachers can obtain this information through aptitude testing or pretesting. Examinations are used to determine the extent to which the objectives of instructional programme have been met. Analysis of exam results helps the teachers to identify the topics that have been mastered fairly well by students and those that need further instruction or classification. Examination

also helps to evaluate the achievement of the students. Examinations are conducted to discover whether or not the student has been able to acquire certain amount of knowledge or skill. Examinations are used to motivate the students to work hard and learn better. The knowledge that one's performance is to be evaluated also increases motivation which facilitates learning; and learning is bound to be more meaningful if students realize that their efforts and achievements are being recognized.

Examinations are used to diagnose specific area of learning difficulties. Exams or tests can be conducted to determine particular problem of students such a reading difficulty, difficulty in solving mathematics problem etc and institute appropriate corrective measure/action. Examinations/tests are used to promote good study habits. One aspects of good study habit is frequent review. Frequent testing keeps students up to date and improves teaching-learning process. Examinations help to measure the efficiency of teachers and of the school or college. Examination provides a suitable occasion for the authorities to measure the efficiency of teachers. The efficiency of the institution is also measured through examinations. They provide proper opportunity to teachers to know whether or not their methods of teaching are appropriate.

Administrator's Use of Tests

Tests can be used in various ways to promote a maximum utilization of human and material resources to facilitate productivity in teaching - learning conditions. Administrators use tests in the following ways:

1. To compare its status with those of other institutions. This is especially more applicable to a school administrator.
2. Tests help administrators evaluate the work of members of staff or personnel as well as in deciding the needed elements of in-service training or education for the members of personnel.
3. Administrators use tests (in form of appraisals examination) to promote workers and students to next post and class respectively.
4. Test help administrators in proper placement of workers and students in courses. Proper placement is crucial in courses like mathematics, science, music and other discipline where new work cannot be successfully undertaken

without prior mastery of the proceeding ones.

5. Examinations are generally used by administrators to determine how far the objectives of the institution have been achieved or met.

Counsellors Use of Tests/Examinations

Counsellors need valid and precise information to help them establish proper relationship with their clients. Examination scores properly derived and interpreted can give tremendous support to clinical aspects of counsellor's work. They specifically lead to understanding of clients' problem (Bassavanthapa, 2003).

1. Counsellors use examination score to help clients gain understanding.
2. Counsellors use test/exam data to help predict future performance at college at work and so on.
3. Test data are used by counsellors to aid clients to make educational and vocational planning.
4. Tests/exams help counsellors to diagnose clients' social, psychological, personal and scholastic problem.

Accurate diagnosis makes possible the application of appropriate treatment technique.

Industrial and Military Use of Tests

Group tests of intelligence have their origins in the need with the selection and classification of military personnel. Tests serve similar functions in industries as in military services. During the First World War, the Army Alpha and Army Beta tests were developed to recruit people into the officer and private cadres. In industries the use of aptitude tests of various types forms an important selection procedure. Test scores are often used in the industry and military institutions with clarification of personnel into proper job segments. For instance, tests are used by the military to separate recruits into bombardiers, radio operators, range finders and other military specialities. Tests are used to identify individuals who deserve promotion.

Research Use of Tests/Examination

Tests have fundamental role in educational psychological and clinical research. Almost all problems in individual differences be it in education, industry, health sciences, psychology or sociology require the use of tests as the basic instrument for data collection. The use of tests as research tool makes it possible to arrive at valid conclusions about events and persons. Such a procedure permits for the replication of results since observations made were uniform and standardized. Thus the use of tests in research makes the generalization of result much more possible. When a standardized instrument is used in research as a particular place, the results from such a study can be compared with those from other places using the same instrument.

Types of Examination

According to Ukwuije (1991) tests and examination can be used interchangeably. He opined that tests can be classified in different ways.

1. According to who constructs them?
 - Teacher-made test
 - Standardized test
- a) Teacher-made test is a test constructed by classroom teacher to assess the extent to which specific instructional objectives have been achieved.

Ugodulunwa, (2008) defined teacher-made test as tests prepared and used by classroom teachers for a specific class and designed to cover smaller area of content, knowledge or skills. According to him construction of teacher-made test is limited to the resources and competence of teachers.

Teacher made tests are usually achievement tests designed and used for evaluating the extent to which a particular content or units taught have been mastered by students.
- b) A standardized test is a test constructed by experts in the field of psychometrics for which the content has been selected and checked empirically, for which norms have been established for which uniform method of administering and scoring have been developed and which may be scored with a relatively high degree of objectivity (Ukwuije, 1991). In another

definition Ugodulunwa (2008) said that standardized tests are tests that have been carefully constructed by experts, usually with try out analysis and revision. They are tests administered under uniform conditions and provided with tables of norms for score interpretation. The essential features of standardized tests are that they are carefully designed by curriculum and test experts and are pre-tested to determine the difficulty level of items, amount of time required for testing and typical scores of different groups of student. Each standardized test is accompanied with a manual that specifies the purpose of the test; the procedure for preparing of the test, directions for test administration, scoring and interpretation of scores as well as research reports in which the test was used as instrument for data collection. Standardized tests can be achievement, diagnostic or aptitude tests.

According to Ukwuije (1991) when classification is based on the type of item format used, we have essay and objective tests. When it is based on the type of stimulus material used to present the problem to the student in this situation it can be verbal and non verbal. When it is based on the purpose of the test and the use of the test results - we have criterion referenced versus norm criterion referenced tests, achievement versus performance tests, formative and summative tests', these tests just listed can be constructed by the classroom teacher.

Essay Items

These types of examination items assess the complex learning objectives as well as processes used to answer the question. An essay test is a test containing questions requiring the student or testee to respond in writing. Essay tests emphasize recall rather than recognition of the correct alternative (Bassavanthapa, 2003). The most distinctive feature of essay test is freedom of organization and expression of ideas. The essay test is the traditional type of examination requiring the examinee to describe, define, compare and contrast, analyze, enumerate, illustrate, classify or state or to discuss, evaluate, explain and so on depending on the type of essay test item (Ukwuije, 1991).

Types of Essay Items

There are two main types

- i) Extended response (long) essay items
- ii) Restricted response (short) essay items

Extended Response Essay Type Item

In extended response, no restriction is placed on the student as to the points he or she will discuss and the type of organization to use. Students may select those points that he/she thinks as most important, pertinent and relevant to his/her argument and may organize the material in whichever way he wishes e.g. discuss the importance of nursing education. An extended response type of essay question permits student to demonstrate their ability to:

- ! recall factual knowledge
- ! evaluate their factual knowledge
- ! organize their ideas
- ! present their ideas in a logical, coherent fashion

Restricted Response Essay Type Item

The restricted response type essay test items limit both the content and form of testee's responses. This type of essay items are effective for measuring interpretation and application of ideas in specific areas but less valuable for measuring originality integration and organization. This type of question tend to be more objective while the extended type questions tend to be more subjective e.g. describe in not more than 100 words the recommendation made by the health survey and development committee with regard to improvement of health care delivery system in India (Bassavanthapa, 2003).

Objective Test Type

The objective items are regarded as new type of test. These items are called objective because they can be scored more objectively than any other type of item used to measure students performance (Bassavanthapa, 2003), thus, objective type test refers to any written test that requires the examinee to select the correct answer from among one or more of several alternatives or supply a word or two and that demands an

objective judgment when it is scored. The students are given the opportunity to react to a large sample of questions which may cover the entire content area. The objective items are set in such a way that one and only one correct answer is available to a given item. In this case every scorer would arrive at the same score for each item and for each item and for each exam even on repeated occasions. The objective items consist of items measuring specific skills with correct response to each of the items irrespective of the scorer's personal opinion, bias, mood or health at the time of scoring.

Classification of Objective Items

There are a number of varieties in objective type test. The common types which are widely used are:

1. Supply type or recall type
The supply type is further divided into
 - i) Short answer
 - ii) Completion
 - iii) Association
2. Selection type or recognition type which is also divided into:
 - i) Alternate response test
 - ii) Matching
 - iii) Multiple choice
3. Context-dependent
 - i) Pictorial form
 - ii) Interpretative

Short Answer Type Items

A short-answer item is classified as a supply or recall type objective and it has three common varieties:

- a) **The question variety**
Here the item is presented as direct question; e.g. who is the founder of modern nursing.
- b) **The Completion Variety**

Here an incomplete statement is used, e.g. sphygmomanometer is used to measure.

c) **The Association Variety**

Here a few items are given outside the bracket. Students are expected to write the exactly related response in the bracket. e.g. write the name of the common instrument which measures the following temperature () blood pressure (), heart rate ().

Alternate Response Type Tests

An alternative response test item consists of a declarative statement that the student is asked to mark true or false, right or wrong, correct or incorrect, yes or no, fact or opinion, agree or disagree and the like. Because the true false option is the most common, this item type is most frequently referred to as the true/false item.

Matching type item

A matching item is that which provides a defined term and requires an examinee to match identifying characteristics to the correct term (www. examination and types, com 2010), it consists of two parallel columns one column contains a list of words, numbers, symbol or stimuli (premises to be matched with a word, sentence, phrase or other possible answer from the other column (responses) lists. The examinee is directed to match the responses to the appropriate premise usefully; the two lists have some sort of relationship. Although the basis for matching responses to the premises is sometimes self evident but more often, it must be explained in the directions. The examinees task then is to identify the pairs of items that are to be associated on basis indicated. Sometimes the premises and responses list is an imperfect match with more lists in either of the two columns and the direction indicating what is to be done. For instance an examinee may be required to use an item more than once or not at all.

Multiple choice type test item

A multiple choice item consists of a problem and a list of suggested solutions. The problem may be stated as an incomplete statement or a direct question and is called the stem of the item. The rest of the suggested solutions may include words, number, phrases or symbols are called alternatives (also called choices or options. The student

is typically requested to read the stem and the list of alternatives and to select the one correct/best alternative. A multiple choice item has two parts i.e. the stem and the options or response i.e. list of suggested answers.

- ! The stem consisting of a direct question or an incomplete statement that is answered or completed by one of the alternatives.
- ! The options or responses refer to them, there will be two or more alternatives consisting of answers to questions or completion of statement. In which are "distractors" and a 'key' all incorrect and less appropriate alternatives are called distractors or foils. And the student's task is to select the correct or best alternative known as 'key'.

While constructing multiple choice type test items, there should be at least three options (consisting of distractors and key) to reduce the chance of guessing, for example stem: the epithelium lining the colon is called.

Options

- | | | | |
|----|--------------|---|-----------------|
| a) | Squamous | } | |
| b) | Cuboidal | } | Distractors Key |
| c) | Transitional | } | |
| d) | Columnar | } | |

The multiple choice item is a very versatile test that can measure a variety of levels of functioning. It is less susceptible to guessing and is popular with learner. There are various forms of multiple choice items. The commonly used ones are as follows:

- i) **Correct answer form**
It contains three or more choices but only one of them is correct.
- ii) **Best answer form**
In this one or more or all the choices may be correct but one of them is the best answer. The examinee is required to select the best one.
- iii) **Multiple response form**
Here the correct answer may consist of more than one choice and the examinee is asked to identify all those which are correct.

iv) **Incomplete statement Form**

Here the stem is incomplete and can be completed by the correct response.
The examinee is asked to select the correct one.

v) **Substitution form**

In this form the word outlined in the stem is to be substituted by the correct response.

Responses are, given and the examinee is asked to select the one which can substitute the desired word

iv) **Combined response form**

Here the choices are different phrases or sentences of a paragraph. The examinee is required to write correct order of the phrases or sentences.

There are varieties of format used in multiple choice items. The commonly used one are as follows:

1. **Question variety**

Stem: who in the following invented micro scope.

Response

- a) Robert chock
- b) Chester Bernard
- c) Alexander flaming
- d) Hansen Fredrick

2. **Incomplete variety**

Stem: Microscope was invented by response

- a) Robert kock
- b) Chester Bernard
- c) Alexander flaming
- d) Hansen Fredrick

3. **One correct answer format**

Stem what is normal body temperature?

Response

a) 35.2Ec (b) 36.4Ec (c) 37Ec (d) 38Ec

4. **Best answer type**

Direction put a tick (%) mark against the best entry.

Stem the value of ♠ can be accurately given response.

a) 2.00 (b) 22/7 (c) 3.1 (d) 3.142

5. Analogy type. In this, the student is required to deduce the relationship that exists between the first two parts of the Item and then apply it to the third and fourth part. Normally, third part is given and the missing fourth part is selected from the list of options on the basis of the relationship existing between the first two parts.

e.g. stem. Vitamin A, Night blindness Vitamin C

Response (a) beribers (b) scurvy (c) certinin (d) pellegra

6. Reserve type. It is sometimes called the negative variety of the multiple choice item. Hence all but one of the responses are correct. The student is asked to select the incorrect response its use unless necessary, is not recommended.

Examination performance

Examination performance is the grade or score a student gets following an examination. It can be low, average or high depending on the type of examination, mental ability of the students and other circumstances surrounding the examination. It has been established that many students have the cognitive/mental ability to do well on examinations but may not do so because of high levels of test anxiety.

Examination performance may be poor or good depending on

a lot of factors, student factors, factors in the environment or with the examination itself.

Students' factors

When there is lack of preparation on the part of the student the result is poor examination performance. Lack of preparation may come in form of procrastination to read/study or poor study habit. Either or both of these will lead to emptiness on the part of the student which will result in exam failure or poor performance. Also the mental ability of the student taking the examination will play a role as people with low

mental ability or intelligence quotient tend to perform poorly in examination. Students with low self esteem who generally look down on themselves and conclude that they cannot do well often perform poorly in examinations because their negative thought will weigh them down and thus they cannot study hard to do well. There may not be enough time for students to study and prepare for the examination, this lack of preparation will arouse anxiety in the students and thus worsen their condition which result in low examination performance.

Environmental factors

Factors in the environment that can affect examination performance include noise in the exam environment which will not allow students to concentrate and recall information stored in their memory. Also unconducive environment like very hot or very cold temperature of the examination hall will keep the students uncomfortable and therefore not in the best frame of mind to think and recall information. Furthermore distraction in the environment like loud music or incessant telephone calls will be disturbing. Distraction can also come from loud conversation among the invigilators.

Factors from the examination itself

The examination may contain item that are very difficult or the examination may include areas not yet covered in the course work. Examination format/style may be different from what students known and thus contribute to their poor performance. In addition to examination questions/items being difficult, enough time that is commensurate to the difficulty level of the questions may not be given which will invariably contribute to poor performance in the examination.

Review of Related Theories

The theoretical framework used for this study is the cognitive interference theory and additive model.

Cognitive Interference Theory (CIT)

Cognitive interference theory by Underwood in (1915) was developed to understand how anxiety influences cognitive functioning. Proponent of CIT postulates that performance tasks can lead to an increase in evaluation/test anxiety which in turn leads

to an increase in negative self-statements. Attentional resources are diverted from the task demands to process these negative self-statements which act as a form of cognitive interference. Consequently, impaired performance on cognitive tasks results (Sarason, 1988; Wine, 1982). The cognitive interference model suggests that individuals with high levels of test anxiety perform poorly in large part due to an inability to suppress competing thoughts during examination. The theory was derived from findings that individuals with high levels of test anxiety are more likely to worry about outcome of test, compare their abilities to others or dwell on the notion that they are not fully prepared for the exam (Sarason, 1984; Schwarzer and Jerusalem, 1992 in Cassaday and Johnson 2002). The interference explanation is inconsistent with Easterbrook's (1959) classic work on the cue utilization. Easterbrook's (1959) work revealed that conditions that promote high levels of arousal lead to a reduction in the range of cues available to the individual in the situation. Effective cue utilization helps learners by constraining attention to only relevant cues, promoting performance (Easterbrook, 1959 in Cassaday and Johnson, 2002). However, it appears that individuals with high levels of test anxiety are either constraining their attention to inappropriate cues for the task or are incapable of restricting their attention to the range of cues allowing competing thoughts to enter conscious awareness and interfere with performance (Schwarzer, and Jerusalem, 1992).

The model of test anxiety developed through an information processing view extends the traditional cognitive interference model by examining the full range of cognitive functions that may interfere with optimal performance (i.e. Poor encoding and storage skills; Naveh-Benjamin; McKeachie and Lin, 1987). For these students, declines in performance have been attributed to a combination of (a) an inability to effectively process or retrieve necessary information and (b) heightened anxiety brought upon by metacognitive awareness of a lack of preparation or ability (Desiderato and Koskinen, 1969). Supporting data from this model have demonstrated that traditional conception of test failure by high test anxious students is not merely due to "freezing up" during a test situation and suggest, that a bulk of test information is not adequately processed. (Naveh-Benjamin, 1991). More recently, researchers have argued that negative self

statement drain working memory resources (Maclead, 1996). As previously discussed, the working memory system is composed of three subsystems (Baddeley, 1986). Of particular interest within a CIT framework are the phonological loop and the central executive. The phonological loop is of particular interest to CIT researchers because it involves language-mediated processes (Baddeley and Hitch, 1994). Sub vocal rehearsal processes are necessary to maintain auditory information in the phonological loop. An increase in task-relevant or task-irrelevant self-statements could interfere with the rehearsal function of the auditory control system. Consequently, information in the phonological store would decay, thus causing decrements in performance on tasks requiring the maintenance of auditory information in the phonological loop.

CIT theorists argue that both task relevant and irrelevant statements interfere with central executive functioning. In particular it has been speculated that task-irrelevant thoughts impair the central executive's ability to direct attention (Sarason, 1984). It follows that task performance would suffer if less attention is devoted to the task being performed.

Additive model of test anxiety

The additive model of test anxiety by Friedman Werner (1981) asserts that the impact of test anxiety is an additive function of two factors: the individual's trait test anxiety and situation specific variable (Zohar, 1998). Thus, individuals with high levels of test anxiety will experience severe performance declines only in situations that activate the state test anxiety factor. Common situational factors include low self-confidence for specific task, perception of the exam as posing a high level of threat, or an awareness of being under prepared for the examination (Schwarzer Jerusalem, 1992; Zohar, 1998). Kurosawa and Harackiewicz (1995) provided empirical evidence supporting both the interference and additive models of test anxiety. Their study induced various levels of self awareness during a performance task to stimulate salient cognitive interference. Test anxious students reported high levels of concern about performance across all conditions of the task (Kurosawa and Harackiewicz, 1995), revealing the

stable trait component of test anxiety. However elevated levels of concern were accompanied by performance decrements only in conditions where cognitive interference was induced by high levels of self awareness (i.e. being video taped) during the evaluative task (Kurosawa and Harackiewicz, 1995). Therefore, the results demonstrated that interference leads to decreased performance in test anxious students, but the impact of interference is prevalent primarily in specific conditions where the level of self awareness during evaluation is high.

Empirical Review

An early investigation conducted by Sarason (1960) focused on children and test anxiety. He summarized that the test anxious child may have a severe sense of guilt along with situations, the child manifests self-depreciatory attitudes, anticipates test failure, and experience the situation as unpleasant with resultant interference with problem solving. These feelings are thought to persist into adulthood. Sarason developed both test and general anxiety scales for children. His research studies yielded a variety of results, but overall conclusions indicated that a time criterion and no additional trials had detrimental effects on high anxiety students. Similar research was conducted by Sarason (1978). He compiled the examination scores of 34 undergraduate students enrolled in a personality class. Using a test anxiety scale developed by Sarason, high and low anxiety students were identified and their examination scores compared. Average scores, were 32.06 and 30.93 respectively. He then informed all students that they would be given a second examination over the same material and if they got a higher score, it would be entered in the grade book, but they could not be penalized if the score was lower. Second test results for high and low anxiety students were 42 and 33.73 respectively. These results were statistically significant at the 0.0 level, although specific values were not identified. "There was a marked facilitative effect of the no-risk condition for students relatively high in anxiety" (I.G. Sarason, 1978, p.213).

Speilberger (1966) also investigated adult test anxiety in a systematic manner. In 1966, Speilberger conducted studies in which he selected 24 high anxiety students and 24

low anxiety students enrolled in introductory psychology courses at Duke University and the University of North Carolina. Anxiety was determined using scores on the Taylor Manifest Anxiety Scale. Spielberger discovered that in testing situations, the high anxiety group demonstrated overall poorer performance as task difficulty increased. In another study by Cassaday (2001) on cognitive test anxiety and academic performance using undergraduate students of educational psychology at a large Midwestern University. He used a total of 168 females and 53 males. The materials he used for the study included data gathered regarding test anxiety, study habits, undergraduate course examination performance and performance on the SAT. His findings showed that students with high levels of test anxiety were significantly outperformed by those with lower levels of test anxiety on the SAT. Differences in course examination performances were also considerable. The low cognitive test anxiety group outperformed the high anxiety group by nearly standard deviation. Furthermore, students with moderate levels of cognitive anxiety outperformed the high anxiety group in several conditions. Also in an empirical replication in the middle east on effect of examination anxiety on examination performance, Chinta (2005) used 365 undergraduate business students enrolled in fundamentals of management classes at American University of Sharjah a leading school of business in the middle east. Sixty percent of the sample was males and forty percent females. The students were asked to complete two short questionnaires during the course. The first questionnaire which was administered on the first day of class included a question asking students to specify the grade they anticipated receiving in the course. The second was administered at the end of the course immediately prior to the exam. The students were asked to evaluate their anticipated performance on the final exam and their expected final grade. Students' emotional states were also assessed at that time. Students' actual performance on the two mid term exams and the final exam were measured on a five point scale based on letter grade. Findings showed that of all the factors examined anxiety at the time of the final examination appears to be most strongly related with performance expectations at the time of the final exam. Finding also revealed that exam anxiety may be related to preparedness of the students taking the exam. Specifically,

poorer preparation would seem to lead to higher anxiety since a greater chance of a poor performance likely exists.

Ndirangu et al (2009) studied the relationship between test anxiety and academic performance among students in Nyeri district, Kenya. A correlational study design was used. The target population was 83,000 students and too teachers from the district. 80 students from four schools and 12 teachers were randomly sampled. Three instruments prepared by the researchers were administered, that is a students' questionnaire, a teacher's and a students' interview schedules. The results that there is a statistically significant different ($P < 0.01$, $t = 3.736$) between test anxiety levels before and after examinations. It was also established that both girls and boys are equally affected by test anxiety. Finding also showed that there was no significant relationship ($r = 0.06$) between, test anxiety and academic performance.

Heather and April (2009) carried out a study to investigate the effect of test anxiety on academic performance of psychology students of Missouri Western State University. They used two psychology 101 classes who were given identical quizzes. One class took a pop quiz. The participants consisted of 62 college students enroled in two psychology 101 courses at Missoui Western State College. They completed test anxiety surveys. The quiz grades were then compared to the survey scores in order to determine if high and low anxiety groups perform lower than moderate anxiety groups. No difference was found on whether pop quizzes produced more anxiety than planned. There was also no difference in quiz grades between the two groups. Therefore for them academic performance was not found to be related to test anxiety. Also Yousefi et al (2010) conducted a study to determine the relationship between test anxiety and academic achievement among adolescents in Sanandaj, Iran. Correlational study design was used. The respondents comprised 400 students within the age range of 15 - 19 years old that were randomly selected from nine high schools in Sanandaj, Iran. A self administered questionnaire was used for data collection which included Test-Anxiety Inventory (TAI), grade point average score and personal information. Results showed that there is a significant correlational between test anxiety and academic

achievement.

In another study by Osterhouse (2012) on the relationship between classroom anxiety and the examination performance of test - anxious students. He examined the academic performance of low, moderate and high test anxiety students within two classrooms which differed significantly in the mean level of anxiety aroused by examinations. When differences in classroom anxiety were not considered, a significant negative linear trend was observed between anxiety level and academic performance ($P < .001$). No differences were found in academic performance of low test anxiety students within the two classrooms, but a significant interaction was observed between classroom anxiety level and academic performance of moderate and high anxiety students. Moderate test anxiety students tended to obtain slightly higher examination scores in the high anxiety section than low anxiety section, while the opposite was true for high test anxiety students.

Chapel et al (2005) carried a study on 4,000, undergraduates and 1,414 graduate students and found a significant but small inverse relationship between test anxiety and grade point average (GPA) in both groups. Low-test anxious undergraduates averaged a B+, whereas high-test-anxious students, averaged a B-. Also finding from this study showed female undergraduates and graduate students to have significantly higher test anxiety than male undergraduates and graduate students (Chapell, Blanding Silvestein, Yakahasbi, Newman, Gubi & McCain, 2005). Furthermore, Eubank (1993) conducted a study to examine the relationship among test anxiety, academic performance and age in Associate Degree Nursing students.

She employed a descriptive research design collected her data using test anxiety inventory (TAI) and compared to final course grades and ages of 107 first term, second year AND students. She analysed her data using descriptive statistics, the Pearson product moment correlation coefficient and the ANOVA. The findings of this study revealed that as test anxiety increased, academic achievement (course grade) of the Associate degree students significantly decreased no significant relationship between age and test anxiety in the Associate degree students was found.

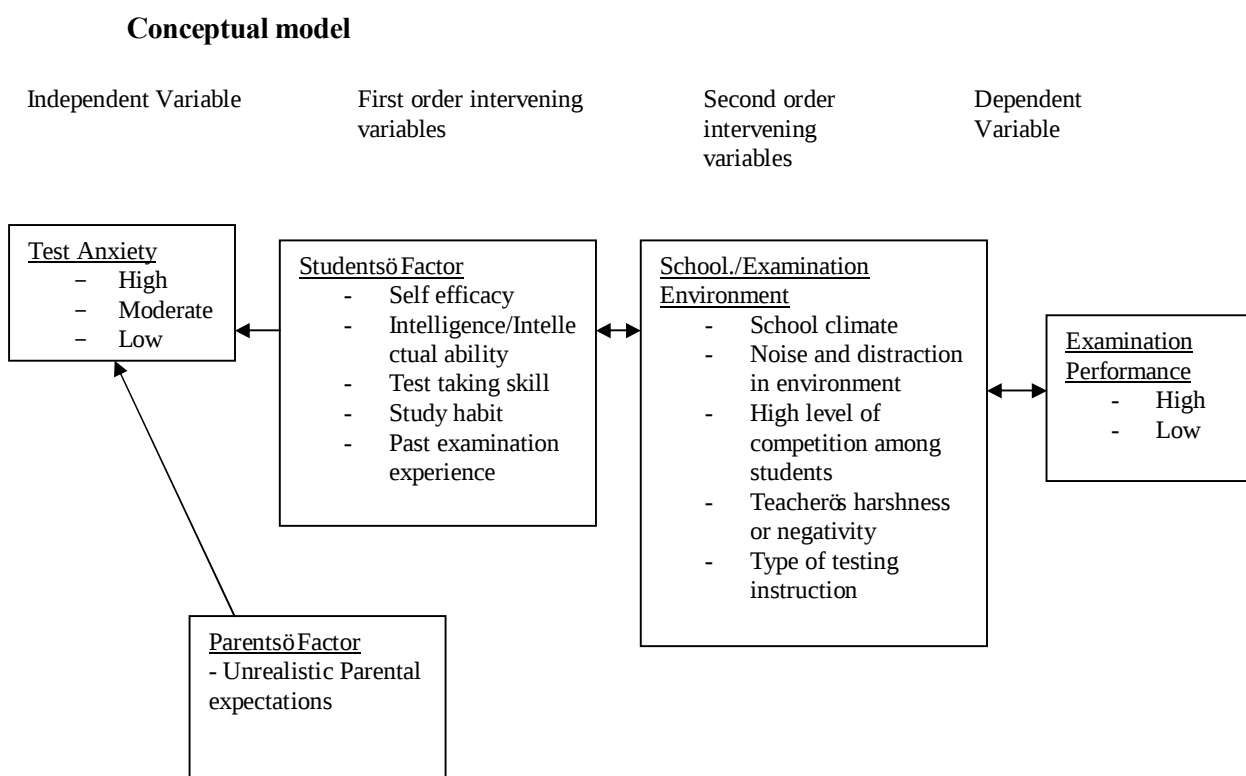


Figure 1: Adopted Model from Underwood’s Cognitive Interference Theory, 2012.

This model shows test anxiety as the main and independent variable. As the independent variable, test anxiety does not depend on any variable rather it can be affected by the intervening variable. There are many intervening variables some of which directly affect the independent variable (test anxiety) by way of increasing it and thus affecting the dependent variable (examination performance). Some of the intervening variables affect the examination performance directly and still leads to poor performance; all these will in turn create a need for treatment or solution for test anxiety.

Independent variable

The independent variable is test anxiety which is a feeling of agitation and distress experienced before, during or after an examination or test. Moderate test anxiety is normal and helps an individual to be alert and active to prepare and take the

examination with a positive outcome but when it becomes high, it becomes detrimental and can affect the individual and examination performance negatively according to reviewed literature.

Dependent variable

The dependent variable in this model is examination performance and it is dependent on test anxiety and some direct intervening variable. From available literature when the test anxiety is moderate, examination performance (scores) will be high but when the test anxiety is high, the examination performance (scores or grades) will be low or poor.

Intervening variables

Are many and are grouped according to the variable they affect.

Intervening variable affecting test anxiety

1. Self efficacy

Bandura (1997) defined self efficacy as beliefs in one's own capacity to organize and execute the courses of action required to manage prospective situations. According to Schwarzer (1994) and Bandura (1995) self-efficacy can make a difference to people's ways of thinking, feeling and acting. With respect to feeling, a low sense of self-efficacy is associated with anxiety and helplessness. Onyeizugbo (2010) in her work on self efficacy gender and Trait Anxiety as moderators of Test Anxiety found that students with low self efficacy had higher test anxiety and vice versa.

Intelligence/Intellectual ability

Intelligent quotient is a scale for measuring one's level of intelligence. People with high intelligent quotient are regarded as intelligent people. They are also known as over achievers. This group of people are likely to suffer from test anxiety because of unrealistic goal they set for themselves. They feel pressured to perform well in every examination.

Unrealistic goals

As mention earlier intelligent and gifted people set unrealistic goal for themselves because they feel pressured to do well in every examination thus they often experience high level of test anxiety which invariably affects their performance negatively.

Parental expectations

Many parents especially those of intelligent children normally have high expectations of their children's performance which puts a lot of fear and tension into the children thus increasing their test anxiety. It is like the children setting unrealistic goals for themselves both of which increase test anxiety and lead to poor examination performance.

Test taking skill

With poor test taking skills will become anxious under any testing situation which will in turn affect their performance while as those with, good testing skill will feel less anxious and will do well in their examination.

High level of competition among students

When there is high level of competition among students, test irrelevant thoughts will be increased hence the individual will be preoccupied with thoughts about how well other students are doing during examination that will not concentrate. These irrelevant and negative self thoughts will lead to poor examination performance.

Intervening variables that directly affect dependent variable**1. Study Skill/Habit**

When students have good study skills or habit, it helps them to study well ahead of any test or examination and such boost the confidence they have in themselves for any testing situating. This self confidence will reduce test anxiety and increase examination performance and vice versa.

2. Unconducive school climate

When the temperature and humidity of the examination hall or class is too low or too high it will adversely affect the student's performance as they will feel too hot or too cold to think and write the examination.

3. Classroom condition including teacher's harshness

When a teacher is harsh to his/her students, fear will be instilled in the students especially during testing situation and impedes recalling of learned information. Also when a teacher keeps using negative words on the students like calling them dull students and telling them that they will fail, this will make the students see themselves as dull and never do well which affect their anxiety level and thus affect their performance.

4. **Type of testing instructions**

When testing instructions are ambiguous or difficult, it becomes difficult for the students to understand what that are required to do or answer and thus their performance will be poor.

Summary of Literature Review

The literature review is done under the following headings: concept of test anxiety and examination performance, conceptual model, review of related theories, empirical review. The transactional models of anxiety - performance outcome process regard test anxiety as a product of an interaction between an individual's personal traits such as optimism/pessimism and the perceived threat of the situation encountered. This was discussed in details. Also the cognitive interference theory and additive theory which are the theories related to this study were discussed in details. Empirical review overwhelmingly supports an inverse relationship between test anxiety and academic achievement. The empirical review started with the older researchers of test anxiety such as S.B. Sarason (1960) who studied test anxious children and developed both test and general anxiety scales for children. Also a study by I.G. Sarason (1978) was equally reviewed as well as the study by Spielberger (1966). The more recent studies were equally reviewed including Ndirangu et al (2009), a replication in the Middle East by Chinta (2005) and a study by a nurse researcher Eubank, (1993) who used Associate Degree Nursing students at Drake University. The key output of these studies is that there is an inverse relationship between test anxiety and examination performance. Most of these studies were done in developed countries and the researcher is aware that issues of personality construct are influenced by background. Thus the need to determine what the situation is in Nigeria. Hence this study.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter presents the research design, area of study, study population, sample sampling procedure, instrument for data collection, ethical consideration, method of data collection and data analysis.

Research Design

Descriptive co-relational design was used for this study. This design was chosen because in line with Polit (2008) there will be no manipulation of any condition rather the students (participants) will be tested in a more or less natural environment (classroom environment). The aim of descriptive co-relational research is to describe relationships among variables rather than to infer cause and effect relationships. Some researchers like Ndirangu et al (2009), Yousefi et al (2010), Cassady (2001) successfully used this design in their studies of the relationship between test anxiety and examination performance.

Area of Study

Enugu Urban popularly known as "Coal City" is the capital of Enugu State in the south eastern Nigeria. It is bounded in the East by Ebonyi State, in the West by Anambra State, in the North by Kogi and Benue States and in the South by Abia and Imo State. There are two basic schools of nursing in Enugu Urban namely; School of Nursing University of Nigeria Teaching Hospital (UNTH) and School of Nursing Enugu State University Teaching Hospital (ESUTH). The school of Nursing UNTH is still located in Enugu though the permanent site has moved to Ituku-Ozalla. The school was established in the year 1970, immediately after the Biafran war. The school is situated off the Central Police Station (CPS) road in "Udi Siding" Area of Enugu North Local Government Area. It is in close proximity with Central Police Station (CPS) and Nigeria Prison Enugu. The school of Nursing ESUTH has its inception in 1998. It is located off Abakaliki Road in the Government Reserved Area (GRA) of Enugu North Local Government Area. It is in close proximity with the former polo

park now Shop rite and Institute of Management and Technology (IMT) Enugu. In the two basic nursing schools students are usually giving PTS examination at the end of the planned instruction for PTS block. During PTS examination, courses are compressed into four papers. Success in all four papers will enable the students move to the next page of training whereas failure of three or four of the papers will lead to students discontinuing the programme. Also failure of two papers will cause the student to repeat the PTS while failure of only one paper will lead to re-sitting of the papers.

Target Population

The target population for this study was three hundred and eighty three (383) basic nursing students distributed in the two schools are as follows: UNTH, 200 students and ESUTH 183 students.

Sample

A sample of one hundred and forty (140) PTS nursing students was used for the study. The PTS set was chosen because of the PTS examination which is thought to be very anxiety producing due to the fact that there is a level of poor performance that will lead to the student discontinuing the programme. This number represents the total number of PTS students in the two schools, sixty three (63) from UNTH and seventy seven (77) from ESUTH. All the PTS students who met the inclusion criteria were involved in the study because of their small number.

Inclusion criteria

- Willingness to participate in the study
- Must be in PTS class
- Availability at the time of data collection

Sampling Procedure

Purposive sampling was used to select the two schools because they are the only basic schools of nursing in Enugu urban. All the PTS students were used because the population is small.

Instrument for Data Collection

Sarason's reaction to test anxiety scale was used to generate data on test anxiety. It is one of the early anxiety scales developed by Sarason in 1984. It is available online without charge. In addition the developer was acknowledged. The scale contains 40 items scored on a four point modified Likert type scale ranging from "not typical of me" (1) to "very typical of me" (4). It has four subscales namely; tension (10 items); worry (10 items); test-irrelevant thinking (10 items); and bodily symptoms (10 items).

Validity

For the purpose of this study, face and content validity of the instrument was done by the project supervisor and a senior lecturer in the department of education UNN (who is an expert in test and measurement). Their inputs and corrections were effected. Then the instruments were signed by the Supervisor and then used for the study.

Reliability of Instrument

The reliability of the instrument was established in the Western population by Sarason as a standardized test anxiety scale and is high ($\bar{U} = .88$). For the purpose of this study a pilot study was carried out on basic nursing students of Bishop Shanahan Hospital (BSH) Nsukka. First to familiarize the researcher with the procedure of administering the instrument and to determine the number of assistants required for a more efficient data collection and second to test for the reliability of the instrument in this environment and to ensure that the instrument is not culturally biased The instrument was administered once to 50 PTS basic nursing students of BSH Nsukka. Data generated from pilot study were computed, using Cronbach's Alpha to establish the internal consistency and a reliability coefficient of 0.92 was obtained (See Appendix III).

Ethical Consideration

Approval was obtained from the research ethical committee of UNTH (See Appendix V). Administrative permission was obtained from each school principal after presenting the ethical approval and letter of introduction from the Head of Department of Nursing Sciences in addition to explaining the nature and purpose of the research to

the respective principal (see Appendices II, IV, V, VII AND VIII). All participants were duly informed of the objectives and design of the study. Their confidentiality and anonymity were assured and written consent obtained from them.

Procedure for Data Collection

Before data collection, initial visits were made to each of the schools by the researcher. These visits provided forum for introduction and establishing rapport between the researcher, the research assistants, the nursing students and their examination officers (i.e. the tutors in charge of examination). These meetings also provided the opportunity for making all necessary arrangements and preparation for data collection. Such arrangement included allocation of data collection day and time in each school. A short training on administration, completion and collection of the questionnaire was done with the four research assistants who are tutors in the two schools, three females and one male. The Sarason's test anxiety scale was administered a day to their PTS examination and was retrieved by the researcher with the help of 4 research assistants. For data regarding participants' examination performance, participants' examination scores were released to the researcher by the school administration of the two schools following the official release of the PTS results in the two schools under study. There was 100% return rate of the questionnaire as they were collected on the spot after completion. Data collection lasted two days.

Method of Data Analysis

The data collected were analyzed using of descriptive statistics. Pearson product moment correlation coefficient was used to test the relationship while t-test was used to test differences among the schools.

Sarason's test anxiety scale contains 40 items scored on a four point modified Likert type scale ranging from "not typical of me" (1) to "very typical of me" (4). It has four subscales namely; tension (10 items); worry (10 items); test-irrelevant thinking (10 items); and bodily symptoms (10 items). Responses on all items were summed to give a total scale score ranging from 40 to 160. Scores between 40 and 79 are regarded as mild anxiety; scores between 80 and 119 are regarded as moderate anxiety while scores from 120 to 160 were regarded as severe anxiety. Sarason's reaction to test

anxiety scale was adopted for this study because it is a standardized instrument and its reliability and validity are well established. It has equally been used extensively in research.

To realise objective one, data generated were computed and analyzed in line with the three known levels of test anxiety. Score range from 40 ñ 79 is taken as mild anxiety, 80 ñ 119 as moderate and 120 ñ 160 as severe, anxiety.

CHAPTER FOUR PRESENTATION OF RESULTS

The results of the data analyses are presented in this Chapter. The results are presented in Tables according to the research objectives and hypotheses.

Table 1: Showing demographic characteristics of the respondents

n = 140		
Demographic Variable	Frequency	Percentage
Gender		
Females	127	90.7
Males	13	9.30
Total	140	100
School		
UNTH		
Females	56	40.00
Males	7	5.09
Total	63	45.00
ESUTH		
Females	71	50.7
Males	6	4.3
Total	77	55

Table 1 above showed a total of 140 (100%) participants. And of this 140 participants, 127 (90.7%) were females while the remaining 13 (9.30%) were males, 63 (45.00%) were from UNTH and 56 (40%) of this 63 were females while 7 (5.09%) were males. 77 (55.00%) of the participants were from ESUTH; 71 (50.70%) of this 77 were females and 6 (4.30%) males.

Objective 1: To establish test anxiety levels of the nursing students during examination.

This result is presented on Table 2.

Table 2: Showing levels of test anxiety of the respondents

n = 140

Class Internal	Frequency	Percent	Remark
40 - 79	88	62.9	Mild anxiety
80 - 119	52	37.1	Moderate anxiety
120 - 160	-	-	Severe Anxiety

Table 2 shows that 88 (62.9%) of respondents had mild test anxiety; while the rest 52 (37.1%) had moderate test anxiety.

Objective 2: To determine the relationship between test anxiety and examination performance

To realize this objective, scores on Sarason's test anxiety scale were correlated with students' examination scores for all the students. The result of this analysis is presented on Table 3.

Table 3: Showing relationship between test anxiety and examination performance

n = 140

Measure	N	r	Level of Significance (P)
Total examination performance	140	- .20	.02
Practical	140	- .16	.05
Written examination	140	- .17	.04

Table 3 shows that there was a low negative relationship between test anxiety and total examination performance $r = -.20$, $N = 140$, $P = .02$. The Table also shows a low negative relationship between test anxiety and practical examination $r = .16$, $N = 140$, $P = .05$. The Table equally shows that there was a low negative relationship between test anxiety and written examination alone $r = -.17$, $N = 140$, $P = .04$. This means that

test anxiety is inversely related to examination performance. As the test anxiety increases, examination score decreases and vice versa.

Hypothesis 1: **There would be no significant relationship between test anxiety and examination performance.**

Table 4: **Relationship between test anxiety and examination performance of nursing students.**

Measure	N	r	Level of significance	α	Decision
Examination performance	140	- .20	.02	0.05	H ₀ Rejected

Table 4 shows that there was low significant negative relationship between test anxiety and examination performance: $r = -.20$, $N = 140$, $P = .02$. This means that test anxiety is inversely related to examination performance; that is, as test anxiety increases, examination performance decreases and vice versa. The null hypothesis is therefore rejected.

Objective 3: To determine the differences in the levels of test anxiety between schools.

Table 5: Showing difference in level of test anxiety between schools

Category	N	Mean	SD	Mean Difference
UNTH	63	2.01	0.45	0.07
ESUTH	77	1.94	0.42	

Table 5 shows that Nursing students from UNTH reported higher mean score on test anxiety (mean $s = 2.01$, $SD = 0.45$) than Nursing students from ESUTH (mean $= 1.94$, $SD = 0.42$). The mean score difference was very low (mean difference 0.07).

Hypothesis 2: There would be no significant difference in test anxiety levels of students of UNTH and those of ESUTH

Table 6 Showing difference between Nursing students of UNTH and those of ESUTH in test anxiety

Category	N	Mean	SD	Mean Difference	df	t	sign	95% CI of the difference	Decision
UNTH	63	2.01	0.45	0.07	138	0.99	.33	-0.07 to 0.22	Accepted
ESUTH	77	1.94	0.42						

Note: $\alpha = 0.05$, NS = Not Significant

Table 6 shows that there was no significant difference in the test anxiety levels of nursing students from UNTH and those of ESUTH. Therefore, hypothesis 2 is confirmed thus accepted.

CHAPTER FIVE

Discussion of Findings, Educational Implications, Conclusions, Recommendations and Summary

This chapter deals with the discussion of the findings of the study, the conclusions drawn from the findings and the educational implications of the study. Recommendations are made based on the findings of the study and suggestions for further research highlighted. Also limitations of the study as well as brief summary of the entire work are presented.

Levels of test anxiety of nursing students during examination.

Objective one sought to establish test anxiety levels of the Nursing students during examination. One of the major findings in this study is that the participants demonstrated two levels of test anxiety viz: mild and moderate. Majority of the participants 88 (62.9%) experienced mild anxiety while the rest of the participants 52 (37.1%) had moderate anxiety during examination. None of the participants experienced severe anxiety during the PTS examination.

This finding is within normal expectation because it is pretty normal to feel a little nervous and stressed up before or during a test/examination. And a touch of nervous anticipation can actually help one fire up and be at peak performance while taking the examination (Lyness 2010 in Teenshealth). It is also expected that students' levels of test anxiety will rise during examination period as compared to other times of the school session (Ndirangu et al, 2009). The finding agrees with Osterhouse (2012) who examined the academic performance of low, moderate and high test anxiety students within two classrooms and discovered that they differed significantly in the mean level of anxiety aroused by examinations. This finding could probably be attributed to differences in personality make up, level of intelligence, study habits, classroom situation and the importance attached to the examination.

However the above finding is contrary to the findings of the study by Ibrahim (1996)

in Ndiranga et al (2009) who found no significant difference in levels of test anxiety of college students during the beginning of term, middle of term and prior to end term examinations. This was attributed to inclusion of continuous assessment test marks (40%) in the final examination, being prepared for the examination among other things.

Relationship between test anxiety scores and examination performance

Finding in Table 3 shows that there is an inverse relationship between test anxiety scores and examination performance scores of the nursing students. This means that as the test anxiety scores are increasing the examination performance scores will be decreasing and vice versa. This finding is normal because test anxiety known to impair concentration, attention and working memory, thus prevent the recall of previously learned material and leads to low examination performance Keoghi et al (2004) .

This finding is consistent with findings from other researchers. Eubank (1993), conducted a similar study using associate degree nursing students at University of Drake and found that as the students' test anxiety increased their examination performance significantly decreased. This finding however differs from that of Heather and April (2009) who carried out a study to investigate the effect of test anxiety on academic performance of psychology students of Missouri Western University and found no relationship between academic performance and test anxiety.

Relationship between test anxiety and practical examination performance.

Finding revealed that the relationship between test anxiety and examination performance was lowest in practical examination ($r = -.16$). This means that test anxiety did not affect the students so much in their practical examination performance. This could be as a result of the clinical posting and practice of the procedures anticipated to come out in the practical examination. The reason could also be that practical examinations usually come much later than the written

examination and it follows naturally that test anxiety must have resolved to an extent after the written examination. The reason could further be due to the fact that practicals involved demonstration, doing and repetition which leads to increased ability and confidence. This finding disagrees with that of Lyness (2010) who found that test anxiety increased with performance or in a situation where performance really counts as in practical examination. This finding is also contrary to the findings of the student doctorsö network (2008) where students admitted having more test anxiety during their pre-clinical practical examination.

Relationship between test anxiety and written/essay examination performance

The result of the analysis showed that the r value for essay/written examination performance was $- .17$ and second to r value for total examination performance. This means that test anxiety in essay examination accounts more for the value in the total examination performance. In other words test anxiety of all the participants affected them more in the written examination. This could be due to the fact that written examination comes first and before the practical and as such anxiety is bound to be concentrated and higher than in practical. This finding is in agreement with the view of Goldman (1971 in Muola 2009) that individuals with high level anxiety tend to do worse on cognitive tests. The finding also concurs to that of Eysenck (2001) that test anxiety impaired concentration, attention and memory and thus influenced academic performance.

Difference in test anxiety levels between schools

Findings on Table 6 revealed that although participants from UNTH had higher score on test anxiety mean than those from ESUTH. The t -value however was not significant. This finding confirmed hypothesis 3 which stated that there would be no significant difference in test anxiety levels of participants from UNTH and those of ESUTH. The hypothesis is thereby accepted. This finding does not agree with Osterhouse (2012) whose major finding was that significant differences were obtained in the mean level of test anxiety in different classrooms and these

differences were marginally related to the examination performance.

Conclusion

This study investigated the relationship between test anxiety and examination performance of Basic Nursing Students in Enugu urban UNTH and ESUTH.

The following conclusions are drawn from the study on the basis of the findings of the study.

1. The Nursing students had only mild and moderate anxiety level no high/severe anxiety. Majority of the participants were found to have mild test anxiety while the remaining had moderate test anxiety. Both mild and moderate levels of test anxiety are said to be normal as they will help fire up the students and spur them into action for better preparation for their examination and consequently enhance examination performance.
2. There is an inverse relationship between test anxiety and examination performance which is to say that as the level of test anxiety increases the examination performance will be declining.
3. Test anxiety affected the students less in their practical examination than in written and total examination performance.
4. It can be conclusively said that there is no significant gender and school difference in test anxiety levels of basic nursing students in Enugu urban.

Educational Implication of the Study

1. Anxiety is thought to affect test and examination performance, students with low levels of test anxiety have higher academic achievement than the students with moderate and high test anxiety and vice versa (Keoghi, 2004).
2. Severe test anxiety is not good for students as it will lead to poor examination performance.
3. Some Nursing students may fail exam or exist nursing education because of effect of test anxiety.
4. Students with severe test anxiety will benefit from pre-examination counseling

and techniques/strategies for coping with test anxiety.

Recommendations

In view of the findings and educational implications of the study the following recommendations are made:

1. Students who have mild and moderate test anxiety before, during or after examination should be made to understand that it is normal to feel that way and that it will help spur them into preparation for better performance.
2. Teachers should be made to understand, that severe test anxiety is detrimental to students' examination performance and so students who show such level of test anxiety before or during examination should be assisted with relaxation techniques and other methods of coping with stress and anxiety.
3. Nurse educators need to further investigate the type of variables that contribute to text anxiety and the degree they do.
4. There is need to develop a curriculum that is inclusive of strategies of coping with test anxiety and also develop guide books to help students deal with test anxiety.
5. Students should seek counselling before doing examinations so as to increase their confidence. They should also have good study habit, avoid last minute rush revision and have adequate rest before examination.
6. Because of the anxiety some students experience during examination depends on several factors such as problems with retrieval of information during the examination and "going blank or problems with encoding, organizing and storing course information due to poor study skills among others, it is important to identify the underlying problem and develop a plan for the student based on the specific anxiety producing deficit".

Limitations of the study

The researcher encountered some limitations which will affect the generalization of the findings. These limitations include:

Paucity of literature in our environment hence empirical review was mainly foreign

studies. The study was limited to basic nursing students because of peculiarity of the examination, used which is very anxiety inducing (PTS).

The study was also restrained by the fact that there has to be uniformity in the level of study of the students and the type of examination used in the study so only a particular set and type of examination were used.

Suggestions for further research

1. A comparative study of the levels of test anxiety and its relationship with examination performance in both basic and generic nursing schools.
2. A replication of this study is suggested in other basic schools of nursing in the south-east and other geopolitical zones in Nigeria.
3. Also a study of other causes of poor examination performance is suggested.
4. Suggestion is also made of evaluating test anxiety and stress reducing interventions or test anxiety coping techniques and strategies.

Summary of the Study

The main purpose of the study was to determine the relationship between test anxiety and examination performance of basic nursing students in Enugu urban. The study was guided by three research objectives and two hypotheses. The hypotheses were tested at $P < .05$ level of significance, some related literatures were reviewed. The review of literature was based on published and unpublished thesis and dissertations, text books, journal articles and internet sources. Descriptive correlational design was used for the study. Two basic schools of nursing were purposively selected and the same set (2012) were chosen from each of the schools.

Sarason's reactions to test anxiety scale was used to collect data on students' test anxiety level while the schools' record of published PTS results was used for students' examination performance.

Data was arranged, coded and analyzed according to the research objectives and

formulated hypotheses. Pearson's product moment correlation coefficient (r) and t test were used to test the hypotheses using the statistical package for social sciences (SPSS) version 17. The results of the analysis were presented in tables.

The findings of the study showed that

1. The Nursing students had mild and moderate test anxiety levels only no high test anxiety.
2. There is low negative relationship between test anxiety and examination performance which means that when the test anxiety is mild examination performance will be good.
3. The students had least relationship between test anxiety and their practical examination performance. In other words they were least affected by test anxiety in their practical examination.
4. The students of UNTH were least affected by test anxiety in their practical while ESUTH students had their lowest test anxiety r value in their written examination.

Based on the findings of the study, the conclusion is that there is inverse relationship between test anxiety and examination performance. Thus the major educational implication is that mild anxiety enhances examination performance while severe test anxiety leads to poor examination performance. The recommendation is that teachers should be able to identify the underlying problem inducing test anxiety in a student and develop a plan for the student based on the specific anxiety inducing deficit. There is also need to develop a curriculum that is inclusive of strategies of coping with test anxiety. The major limitation of this study is that the findings cannot be generalized to all nursing students as only the students of basic nursing schools were used and only two basic schools in Enugu urban. Suggestions for the replication of the study in the generic nursing programme and other basic nursing in the south east are highlighted.

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APPENDIX 1

Nursing Sciences Department
Faculty of Health Sciences and
Technology
University of Nigeria
Enugu Campus

Dear Respondents,

I, Mrs Obi-Okonkwo I.I., a postgraduate student of Nursing Sciences Department, University of Nigeria Enugu Campus wish to solicit your co-operation in research work. I am conducting a research to determine the relationship between test anxiety and examination performance in partial fulfilment for the award of Masters Degree.

Kindly complete the attached questionnaire on the way you react to tests and examination. Please be honest to enable me get the true picture of the construct under study. Your information will be used solely for this research and will be handled with confidentiality.

Together we can move our noble profession forward especially through research.

Thank you.

Obi-Okonkwo I.I

QUESTIONNAIRE

DEMOGRAPHIC DATA

Examination Number _____

Age _____

Name of School _____

Set _____

Gender _____

REACTIONS TO TESTS

Almost every body takes test of various types and there are differences among people in how they react to them. The purpose of this survey is to gain a better understanding of what people think and feel about tests. In filling out this survey, for each item please tick the response alternative that reflects your typical reaction to the situation described.

- 1 - Not at all typical of me
- 2 - Only somewhat typical of me
- 3 - Quite typical of me
- 4 - Very typical of me

S/N	Items	Not typical of me (1)	Somewhat typical of me (2)	Quite typical of one (3)	Very typical of me (4)
A.	Tension				
1.	I feel distressed and uneasy before tests				
2.	I freeze up when I think about an upcoming test				
3.	I feel fidgety before tests				
4.	While taking a test I feel tense				
5.	I find myself becoming anxious of the day a test.				
6.	I wish tests did not bother me so much.				
7.	I am anxious about tests				
8.	I feel panicky during tests.				
9.	Before tests, I feel troubled about what is going to happen.				
10.	I have an uneasy feeling before an important test.				

S/N	Items	Not typical of me (1)	Somewhat typical of me (2)	Quite typical of one (3)	Very typical of me (4)
B.	Worry				
11.	The thought, "what happens if i fail this test" goes through my mind during tests.				
12.	During a difficult test, I worry whether I will pass it.				
13.	While taking a test, I find myself thinking how much brighter the other people are.				
14.	After a test, I say to myself, "it's over and I did as well as I could.				
15.	Before taking a test, I worry about failure.				
16.	While taking a test, I often think about how difficult it is.				
17.	Thoughts of doing poorly interfere with my concentration during tests.				
18.	During tests, I think about poorly I am doing.				

S/N	Items	Not typical of me (1)	Somewhat typical of me (2)	Quite typical of one (3)	Very typical of me (4)
19.	The harder I work at taking a test, the more confused I get.				
20.	During tests, I wonder how the other people are doing.				
C.	Test-Irrelevant Thinking				
21.	During tests, I find myself thinking of things unrelated to the material being tested.				
22.	Irrelevant bits of information into my head during a test.				
23.	My mind wanders during test.				
24.	While taking a test, I often don't pay attention to the questions.				
25.	I think about current events during a test.				
26.	I have fantasies a few times during a test.				
27.	While taking tests, I sometime think about being somewhere else.				

S/N	Items	Not typical of me (1)	Somewhat typical of me (2)	Quite typical of one (3)	Very typical of me (4)
28.	During tests, I find I am distracted by thoughts of upcoming events.				
29.	I daydream during tests.				
30.	During test, I wonder how the other people are doing.				
D.	Bodily Symptoms				
31.	I become aware of my body during tests (feeling itches; pain, sweat, nausea).				
32.	I feel the need to go to the toilet more often than usual during a test.				
33.	My heart beats faster when the test begins.				
34.	My stomach gets upset before tests.				
35.	I get a headache during an important test.				
36.	I get a headache before a test.				
37.	I sometimes feel dizzy after a test.				
38.	My hands often feel cold before and during a test.				
39.	My mouth feels dry during a test.				
40.	I sometime find my self trembling before or during tests.				

APPENDIX II

INFORMED CONSENT

Introduction: My name is Irene Ifeyinwa Obi-Okonkwo, a postgraduate student of the department of Nursing sciences, Faculty of Health Sciences, University of Nigeria, Enugu Campus.

Voluntary Nature of Participation: Subjects' participation in this study is entirely voluntary. You have the right to withdraw consent and discontinue participation in the study at any given time.

Study Procedure: I am carrying out a study on "The Relationship between test anxiety and Examination Performance among Students in Basic Nursing schools in Enugu Urban". In this study, you will be required to fill the questionnaire. Please feel free to ask for clarification on any question you do not understand.

Risk: The process of filling the questionnaire will not cause you any harm or injury.

Confidentiality: Please, note that information you give will be kept confidential and your name will never be used in connection with any information you give.

Feed Back: In case of any clarification, you can contact me on 07036601127

Response: The study has been explained to me and I finally understand the consent of the study process. I will be willing to participate in the study described above.

.....
Signature of Participant

.....
Signature of Witness

.....
Signature of Researcher

.....
Date

.....
Date

.....
Date

In case of enquiries, please contact:

Dr. (Mrs.) N. P. Ogbonnaya,
Department of Nursing Sciences,
Faculty of Health Sciences and Technology,
University of Nigeria
Enugu Campus

APPENDIX III
IDENTIFICATION LETTER

APPENDIX IV

Nursing Sciences Department
Faculty of Health Sciences and Technology
UNEC

14 March, 2013

The Principal
School of Nursing
UNTH/ESUTH Enugu

Dear Madam,

PERMISSION TO USE YOUR STUDENTS FOR MY RESEARCH WORK

I write to ask for your permission to give my research questionnaires to your students before their PTS examination and to use their published PTS result for the analysis of the research work.

I am a postgraduate student of Nursing Sciences Department University of Nigeria Enugu Campus. I am conducting a research to investigate relationship between test anxiety and examination performance and your school is one of my areas of study.

Attached is my letter of identification from the Department of Nursing Sciences.

Thank you for your anticipated co-operation.

Yours faithfully,

Obi-Okonkwo I.I.
PG Student UNEC

APPENDIX V
ETHICAL CLEARANCE CERTIFICATE

APPENDIX VI

RELIABILITY TEST OF THE INSTRUMENT
(Crombach Alpha)

APPENDIX VII

CALCULATION OF THE THREE LEVELS OF TEST ANXIETY

The anxiety scale is a four point Likert scale with forty (40) as the lowest score on the scale and one hundred and sixty (160) as the highest score. There are three levels of anxiety - mild, moderate and high/severe. To get the three levels from the reaction to test scale: highest score 160 - lowest score 40 - 120 then

$$\frac{120}{3} = 40$$

$$\text{For mild anxiety} = \text{Lowest score } 40 + 40 = 80$$

$$\text{mild anxiety range} = 40 - 79$$

$$\text{For moderate anxiety} = 40 + 80 = 120$$

.

$$\text{.. moderate anxiety range} = 80 - 119$$

$$\text{For sever anxiety} = 40 + 120 = 160$$

.

$$\text{.. Severe anxiety range} = 120 \text{ ñ } 160$$