

## CHAPTER ONE

### INTRODUCTION

#### **Background of the Study**

Most of the time, students at the verge of entering for a test or examination are seen trembling, fidgeting or panicking. This should not be, as examination or test is a normal situation which one should not be afraid to participate in (Dryden, 1998). It is common to see secondary school students meditating and expressing openly, the type of distress they have during examination or test. This experience of distress before, during or after examination could be a psychological condition, which is a type of anxiety disorder. Anxiety as opined by Halgin and Whitbourne (2003) is one of the most prevalent clinical problems and is a prominent feature in many psychopathological conditions. Hendrick (2008) referred to such condition as a disorder that involves a shift in the way the body responds to normal activities and thoughts.

Thus, test anxiety could be seen as a situation where individuals have fear towards test/ examination that they ought not to experience. It is an unreasonable fear, a condition where someone emotionally or physically experience distress, prior, during or after taking a test/examination (Egbochukwu, Obodo & Obadan, 2008). However, Drowetzky (1997) earlier pointed out that a psychologist definition of test anxiety is where the anxiety negatively affects the person's performance in school, to the extent that it

affects the individual's ability to learn even outside school. Kovel (1991) referred to Yerkes Dodson law which states that an optimal level of anxiety is necessary to best complete a task, such as examination but when the level of anxiety exceeds that optimum level, it results in a decline in performance.

However, Birenbaum and Nasser (1994) claimed that test anxiety has become one of the most disruptive factors in schools. Schafer (1996) pointed out that it has been estimated that 30% of all students suffer from various levels of test anxiety. This is perhaps why Omoluabi (1993) opined that test anxiety in most cases results to frustration and is capable of affecting the totality of the individual as well as his personality. Adeyoju (1995) concurred that debilitating anxiety in students before and during examination has been observed to cause diminishing intellectual performances.

Schafer (1996) summed up the four main sources of test anxiety as; concerns about how others will view you if you do poorly, concern about one's own self image, concerns about ones future security and concerns about not being prepared for a test. And according to Matthew (2008) among the causes of test anxiety is poor time management, cramming a night before the examination, failure to organize information, lack of concentration among others. These mean that test anxiety could be caused by poor study habits, worry about past performance on examinations and many more. However, no matter the route of the test anxiety, any anxiety that continues for a long time or begins to interfere with normal life is considered abnormal.

Psychologists are of the view that there are similarities in the symptoms, for instance, Woodard (2004) opined that students with test anxiety complain of such things as nervousness, inability to concentrate, a blank mind and a feeling of sickness. Similarly Jaytunge (2008) pointed out that some students with test anxiety manifest psychosomatic ailments such as abdominal pains, vomiting, headaches, dizziness, tremor and many more, that have no apparent medical basis. This, according to Egbochukwu (2000) is one of the reasons why Guidance Counsellors are needed greatly in the schools because cases like these that are not medical cases, could keep reoccurring if not handled.

No matter the symptoms it is apparent that the student with test anxiety is unable to behave normal once test/examination is presented, thus most often students with test anxiety, according to Osioma (2001) may resort to short cut measures, like forms of examination malpractice; impersonation, copying, sorting and many more. Similarly, some students in the bid to overcome test anxiety resort to the use of drugs. Hence, it is very important to master the art of staying calm throughout any examination /test, bearing in mind that test or examination is a normal phenomena. However, owing to the fact that examinations are meant to assess or evaluate the academic achievements of students and the method by which the society is assured of the suitability of individual on their chosen fields, promotion from one class to the other, admission into secondary schools, and university, the importance of excellent performance in examination cannot be undermined. Thus examination, in spite

of the adage that says is not a true test of knowledge, still stands as the mainstay, the major determinant of human future, optimal level in academics and invariably achievement and success in life generally.

Smith (2006) pointed out that whether an individual experiences test anxiety, phobia or panic disorder, the person has an anxiety disorder and one can do something to overcome it. Hence, in this study the counselling being received by the students in their respective schools using other techniques other than Self Instruction and Study Skills is referred in this work as counselling.

However to reduce fear and anxiety and other emotional maladjustment problems series of Psychological theories have been propounded and used. These theories as pointed out by Adeola (1987) have embedded in them counselling therapies, which can be used in treatment of emotional maladjustment in general, fear and anxiety in particular. However, Meichenbaum,(1986) in his Cognitive behavioural theory, posited Self Instruction as having to do with helping people to become aware of their irrelevant thoughts which interfere with preparation and effective functioning in learning. In fact, Meichenbaum (1986) in his work opined that Self Instruction was aimed at alleviating those anxieties that other techniques like implosion, Systematic desensitization have failed to reduce adequately. According to Meichenbaum (1986) Self Instruction has such forms as, self monitoring, thought stopping and self verbal mediators. Beck (1996) posited that the proponents of the technique are of the view that the thoughts of

students with test anxiety are negative, which in a counselling process can be reversed to positive thoughts. Ekeruo (1991) pointed out those positive thoughts could be built up to replace the negative thoughts. This could be achieved by first self monitoring, then stopping the thoughts through thought stopping and lastly building positive thoughts, which come in form of self verbal mediators as instructions.

Hence Thompson (1996) pointed out that Self Instruction as a technique directly influences students to reverse what they say to themselves. According to Dryden and Gordon (1999) students perpetuate their fear by their own thoughts, for instance I cannot cope with this subject. Thus in using self Instruction to modify a student, the counsellor instructs the client to adopt the concept of talking to oneself. In a counselling process the counsellor assists the students with test anxiety to build up a repertoire of self statements to be used after self monitoring and thought stopping.

Furthermore, following the Gestalt theory of learning Study Skills are approaches to learning. According to Cottrell (2008) they are generally critical to success in school and are considered essential for acquiring good grades and are useful for learning throughout one's life. According to Tracy (2008) there are numerous study skills which may take the process of organising and taking in new information or dealing with assessments, among which are; study tips, Questioning, Summarizing, Time management, Memory tricks, Examination technique, Note-taking and many more. However, this study applied

Summarization, Study Tips, Note taking, and Memory tricks. Hence, any skill which boosts a person's ability to study and pass examination can be termed as study skill. Gardeners (2008) pointed out that Study Skills are techniques that can be learned usually in a short time and applied to all or most field of learning.

Nelson- Jones (1991) in his view explained the poor performance of students with test anxiety to be as a result of deficient in study skills. However from available literature, like Ekeruo (1991), Halderman and Baker (1992), Beck (1996), Berry (1999) and many more, before a child can be taught to change his/her behavioural pattern, he should learn to identify his self defeating thoughts, evaluate his behaviour and what precipitates his actions and build up positive thoughts to replace them.

### **Statement of the Problem**

Test or examination has been identified as provoking the highest level of anxiety among secondary school students (Schafer 1996). Test anxiety disturbs the victims, often times in the process to overcome test anxiety, most students resort to a number of abhorring and short cut measures such as examination malpractice, drug abuse, among others. The incidence of test anxiety has led some experts to redirect emphasis from examination malpractice to test anxiety. But surprisingly not much has been done to reduce this extreme level of anxiety towards test among adolescents.

Hence test anxiety and its attendant examination malpractice are very serious threat to our educational system and to individual students.

Students with test anxiety need practical assistance through counselling processes. Two popular techniques that came up after the failure of Systematic desensitization to adequately reduce test anxiety are Self Instruction and Study Skills techniques. Self Instruction technique is based on the principle of focused attention, self evaluation, self verbal mediators and many more while Study Skills technique is focused on intervention measures targeted at improving study and test taking skills. The researcher therefore, was motivated to determine the effects of these techniques in reducing test anxiety as contribution to the literature in the area with a local background.

### **Purpose of the Study**

The purpose of this study is to ascertain the effects of Self Instruction and Study Skills Techniques in reducing test anxiety among adolescent students of junior secondary school (JS2) in Awka South Local Government Area of Anambra State.

Specifically, the study determined the:

1. Effects of Self Instruction Technique on reducing test anxiety among secondary school students.
2. Effects of Study Skills Technique on reducing test anxiety among secondary school students.

3. Differences in the relative effect of Self Instruction and Study Skills techniques on reducing test anxiety.
4. Durability of the reduction on test anxiety of students exposed to Self Instruction Technique.
5. Durability of the reduction on test anxiety of students exposed to Study Skills Technique.

### **Significance of the Study**

The result of this study will be of immense assistance to the students, student counsellors, guidance counsellors, researchers, examination administrators, teachers, and the society at large.

Firstly, the students treated with the two counselling therapies will benefit from this study, in that the treatment given to them will enable them perform better academically, socially and adjust better both in school and in the society. When their perception of test is changed, they will no longer indulge in examination malpractice or taking of drugs to overcome anxiety rather they will grow to be well adapted adults who can participate in evaluative exercises.

Furthermore, for the student counsellors, this study will help to expose more effective means of dealing with test anxiety instead of the practice of administering drugs, which some experts like Segmit (2004) questions the long term success of drugs in reducing extreme cases of anxiety. The student guidance counsellors therefore, through the use of the techniques and the



procedures adopted in this study will be well equipped on the treatment and clinical pictures of test anxiety. Hence, when they start practicing, they will be able to handle students with test anxiety effectively using Self Instruction and Study Skills techniques.

The techniques used in this study could be adopted by Guidance Counsellors in their group counselling process. They can even organize an enlightenment seminar/workshop for students and teachers to bring them into full understanding of the effects of Self Instruction and Study Skills on test anxiety of secondary school adolescents. Also the theoretical and empirical framework of this study might be an immense source of reference for guidance counsellors.

Also, the result of this study would be a source of reference to future researchers because the details in the present study would be valuable to researchers who may want to conduct research in the area, giving them limelight on test anxiety reduction using Self Instruction and Study Skills among secondary school adolescents, in the Nigerian setting. The examination administrators would also benefit from the available literature of this study by being aware that the symptoms that may erupt on the students during examination may be as a result of irrational fear or anxiety towards examination rather than ailment. This study will help to expose more effective means of dealing with test anxiety instead of the present practices of viewing the symptoms as ailments like stomach ache, nervousness and others. This

would lead to good school learning environment, which will promote performance in examination. In this era of continuous assessment, teaching and learning in schools will be improved if there is reduction in test anxiety among the students. When students with test anxiety are modified they will be free from anxiety and will no longer avoid test or involve in examination malpractice to make up for their memory that may go blank as a result of anxiety. They will grow up to face examinations or tests with confidence, which invariably is a plus for our educational system and the society at large.

Finally, individuals in the society would be acquainted with the effects of these techniques on reducing test anxiety, when published, which is a plus for the Counselling profession, and our educational system. The information in this study can be disseminated through conferences, workshops, seminars and academic journals.

### **Scope of the Study**

The study is delimited to determining the effects of Self Instruction and Study Skills Techniques, on reducing test anxiety of secondary school students, precisely junior secondary 2 (JS2) students in Awka South Local Government Area of Anambra State. Self Instruction involves using self monitoring, thought stopping and self verbal mediators. While in Study Skills there are numerous skills but this study covered Study Tips, Note taking, Summarization and Memory techniques. Involving giving and acquiring of information on study

patterns, practical use of home work for enhanced self confidence in test taking. The study also covered the durability of the treatment.

### **Research Questions**

The following research questions were formulated for the study

1. What is the mean loss of the students with test anxiety when exposed to Self Instruction technique?
2. What is the mean loss of the students with test anxiety when exposed to Study Skills technique?
3. What is the relative difference in the mean loss of students exposed to Self Instruction technique and the mean loss of students exposed to Study Skills technique in reducing test anxiety?
4. What is the difference in the post test and retention mean scores of students exposed to Self Instruction technique and the post test and retention mean scores of students exposed to Study Skills technique?

### **Hypotheses**

The following null hypotheses are formulated for the study and tested at 0.05 level of significance

1. There is no significant difference in the mean scores of students on test anxiety, exposed to Self Instruction Technique and the students in the control group.

2. There is no significant difference in the mean scores of students on test anxiety, exposed to Study Skills technique and the students in the control group.
3. There is no significant difference in the post and retention test mean scores of students on test anxiety, exposed to self Instruction Technique.
4. There is no significant difference in the post and retention test mean scores of students on test anxiety, exposed to Study Skills Technique.
5. There is no significant difference in the mean scores of students on test anxiety, exposed to Self Instruction Technique and those students exposed to Study Skills Technique.
6. There is no significant difference in the retention mean scores of students on test anxiety, exposed to self Instruction and those exposed to Study Skills Techniques.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

The review of related literature as per this study involves referring to journals, seminar papers, books, the internet and relevant materials on the Counselling techniques, Test anxiety, Cognitive Behavioural theories, Gestalt theories and many more, with emphasis on their concepts, theories and empirical studies.

The review was done in the following order:

#### **Conceptual Framework**

##### **Concept of Self Instruction**

Concept of Self Monitoring

Concept of Thought Stopping

Concept of Self talk

##### **Concept of Study Skills**

Concept of Test

Concept of Anxiety

##### **Concept of Test Anxiety**

Concept of Signs or Symptoms of Test Anxiety

Concept of Gender in Test Anxiety

##### **Concept of Adolescent**

#### **Theoretical Framework**

State Trait Anxiety Theory

Gestalt theory

Cognitive Behavioural Theory

Personal Construct Theory

Self Monitoring Theory

### **Empirical Studies**

Empirical Studies on Self Instruction Therapy

Empirical Studies on Study Skills Therapy

Empirical Studies on Test anxiety

Summary of Literature Review

### **Concepts**

#### **Concept of Self Instruction**

According to Meichenbaum (1986) in his theory the rationale for self Instruction as a technique came up out of the failure of systematic desensitization procedure to successfully alleviate some students' test anxiety. Richard (1997) noted that Self Instruction technique was designed to help individuals with test anxiety in becoming aware of their self defeating and irrelevant thoughts, which interfere with their preparation and effective examination taking.

Dryden (1998) earlier pointed out that adolescent years are period when individuals can be helped to identify their self defeating irrational ideas and learn how to cope with such thoughts. This Gardener (2003) confirmed when he noted that all human feelings and thoughts influence the way we handle

certain things in the counselling relationship. However, a group of researchers from the Royal Australia college of General practitioners was reported by Becks (1996) as positing Self Instruction technique to involve replacing dysfunctional thoughts by self talk, which is functional and guides the person towards adaptive responses to situations they find difficult. This assertion tallies with Meichenbaum (1986) theory that states thus: two goals are identified for the reduction of test anxiety, that students should be made to be aware of those thoughts or self-statements made before and during examination that contribute to poor performance and those statements made after examination which reinforce worry on the students. This Thompson (1996) confirmed when he asserted that Self Instruction Technique intention is to directly influence clients to change what they say to themselves, describing it as a way of breaking a chain of negative feelings and sensations such as fear, anger, anxiety, pain and guilt. Also Richard (1997) earlier pointed out that Self Instruction technique produces a coping template which assists people manage difficult situations and emotions and so improve self efficacy and self esteem. These mean that Self Instruction Technique refers to conducting ones behaviour by an instruction generated by the individual towards an event.

Hence clients are thought to think aloud to replace negative thoughts with coping statements to guide their behaviour and produce a feeling of control, (Halderman and Baker 1992). According to Meichenbaun (1995) Self Instruction Technique aims, at affecting a cognitive restructuring through

developing an alternative inner speech as a mechanism for achieving changes in behaviour.

Thus in reviewing Self Instruction Technique, a Cognitive behavioural approach theorist; Gardner (2003) reviewed the following as the primary processes in self instruction technique; thus – reflex thoughts, limited thinking, changing distress thoughts, relaxation, thought stopping, coping with panic, coping imagery, self monitoring, self verbalization, testing assumptions, the calm technique and many more.

Explaining further, Ekeruo (1991) earlier pointed out that in using self instruction to modify a client, the modifier instructs the person to adopt the concept of talking to himself and the child should be helped to build up a repertoire of self statements to be used on a variety of tasks, by taking off from the area the child has not recorded failures or frustrations, making use of tasks that have self instruction approach and encourage the use of cognitive strategies. Hence Richard (1997) in his views stressed the steps in self instruction therapy, to include memorizing the instructions and learning to say them at the required time. This Lazarus (1991) earlier pointed out, when he cited the sequence of self instruction to use with a client who is experiencing anticipatory anxiety to include the following.

- I will develop a plan for what I have to do instead of worrying,
- I will handle the situation one step at a time, if I become anxious,
- I will focus on what I need to do.



## **Concept of Self Monitoring**

However, before a child can be taught to apply self instruction, for a behavioural pattern, he must learn to evaluate his behaviour correctly. In her theory presentation Synder (1974) recognizes self monitoring as having to do with a person learning to pay careful and systematic attention to the habits and the stimuli that trigger off the problem behaviour. Similarly Ekeruo (1991) Summarized what happens in a clinical counselling setting to involve the client keeping a record of events and situations in a diary. Taking note of the nature of the situations, whether comfortable or uncomfortable and what the client will do if the events reoccur.

Which Dombeck and Wells – Moran (2006) in their assertion, pointed out that one need to have a system in place to self monitor well and that the system should give a description of what one will monitor, how often you will monitor and how you will record your observations. These mean that, in order to encourage a child to evaluate his own behaviour properly, he must be taught to use some sort of standard by which he can measure his own behaviour.

No doubt Meichenbaum (1986) emphasized cognitive behaviour change where clients are encouraged to change the scripted nature of their behaviour. For Snyder (1974) in his theory self monitoring refers to controlling one's behaviour in accordance with observed appropriate behaviours

This Ekeruo (1991) asserted that self monitoring provides a baseline record treatment of behaviour. Thus highlighting the following procedure

1. Both the Client and the Counsellor decides that the client should keep a diary of events and situations in the natural environment.
2. Take note on the nature of the situation, what happened, what was said and what the child did.
3. How he felt whether comfortable or uncomfortable.
4. How satisfied he was with his actions on that occasion.
5. What he will do if the events re-occurs
6. Then any other comments.

### **Concept of Thought Stopping**

Becks (1996) pointed out in his study that when you change what you think, you can change your mood. Burns (1998) concurred that negative unwanted thoughts can lead to anxiety or depression and thought stopping is one way to take active role in reducing unwanted thoughts. Mickey (2007) procedure for thought stopping is summarized as follow –List your most stressful thoughts that make you more intense during test for instance.- Start practicing thought stopping with the thought that is least stressful – Imagine the thought, closing your eyes and focusing on the thought.- Stop the thought by interrupting the thought; keep repeating the process aloud until you start whispering. After stopping the thought go to the next thought, after which you now add a positive thought. Ekeruo (1991) pointed out that thought stopping is a technique used to interrupt negative thoughts and introducing novel stimulus into the person's thoughts, in order to alter or lesson the cues for unwanted

behaviour. Other procedure of thought stopping as pointed by Burns (1999) is the rubber band method, where the client snaps the rubber whenever he says stop to an unwanted thought.

In his own submission Heering (2009) in his anxiety treatment methods, posited, Nuron-Linguistic Programming (NLP) as viewing anxiety to result from our incorrect arrangement of mental programmers where concentration is on how ones thinking results in ones feelings, which in turn influences ones personal capability and incapability. Even the energy psychology treatment for anxiety posited by Heering (2009) where treatment is aimed at the clients emotions, by changing the clients' thoughts patterns. Thus one can be confident and at ease in situations where he/she used to feel anxious and can now talk about his former symptoms as though he is describing a movie where the character is someone else.

### **Concept of Self Talk**

Phillips (1990) has also studied "inner voices" as patterns of internal conversation in narrative form as it influences self. These inner voices Laderman (1996) described as internal Muzak; as it influences interpersonal relationships. In conclusion, Nut-Williams and Hill (1996) demonstrated that self-talk provides a way to actively manipulate the environment, evaluate ourselves, find meaning and direct our behaviour accordingly and that adequate management of self-talk may be important in allowing therapists to maintain an appropriate focus on clients. Thus, by focusing on the thoughts of the client

concerning test/examination anxiety, alleviating of any behaviour related problem, might develop proficiency in examination taking, bearing in mind that, the available literatures show that what individuals say to themselves clearly shapes their behaviour in very specific ways.

Thus, Halderman and Baker (1992) earlier pointed out that the Counsellor hears comments from adolescents such as: - I cannot do that, I will never get this right, no one likes me, which according to him indicate self defeating thoughts. To this Wine (2002) opined that research shows that the self-talk of students with test anxiety usually tend to be negative and self defeating with such negative statements like; I always mess up on examinations, these are trick questions, everyone in this class is smarter and faster than I am, If I do not perform well in this examination, then I will abandon the subject. These mean that self statements have implications for the emotional reaction that could result.

Also Dryden (1998) in his assertion noted that students perpetuate their anxiety by their own thoughts, giving an instance, where a student will be having in his thought that the forthcoming examination is too much for him. Such self statements increase arousal, which could be interpreted by the students as threatening and could lead to more dangerous self statements like; this is all too much for me, I must leave this examination room, I am going to lose control. Halderman and Baker (1992) observed that these self defeating thoughts may lead to maladaptive responses, to a variety of challenging

situations in their lives, such as interpersonal relationships, academic assignments, and personal declarations of self worth. This Zashow (1988) earlier pointed out that emotions and actions are caused by what individuals tell themselves about events through self talk rather than what really happens.

### **Concept of Study Skills**

Kirkland and Hollandsworth (1980) pointed out that study skills are focused on equipping students in effective examination taking strategies, adaptive self instruction statement and skills. Paulman and Kennelly (2004) also posited the proponents of this therapy as having the assumption that intervention measures targeted at improving study and examination taking skills are capable of reducing test anxiety. To this Kirkland and Hollandsworth (1980) enumerated the skills required by the client from the point of preparation of test/examination, before, during, and after the examination, emphasizing on achieving Self confidence in all the stages. Malayalam (2004) concurred, when in his assertion presented a long range of perception to be adopted by the students facing test anxiety in order to overcome it, to include adequate preparation before the test/examination, for enhanced self confidence to enter the examination with fear. The concept of Study skills as perceived by Zbornick (2001) involve test anxiety being remedied of its effects in four forms, which include among others, the teaching of test –taking and study skills. Expatiating further, Zbornick (2001) pointed out that studies have

indicated that certain groups of students with test anxiety, lack the necessary study skills to perform adequately on examination. Similarly, Thompson (1996) in his own submission, opined that among the overall functions of the guidance counsellor is to help students develop coping skills, as most clients problems may be classified in such areas as conflict with self, conflict with others, lack of information about self, lack of information about the environment and lack of study skills. Stressing the link between study skills acquisition and test anxiety, Marshal (1994) likened the memory as a vast filing system where everything one has learnt is being filed and the more learning the more files, where the ones often used like name, address of family and many more, stay in front depending on how often they are referred, thus frequent preparation or study builds confidence and keep the file in front of the memory file. Hence when one is aware that the information is in the memory, fear may not arise.

Onyechere (1996) summarized the principles for one to excel in a test without fear to entail mastery of skills for test preparation. This we can buttress with examples where, for instance, one is at a party where names are exchanged and he/she starts talking, often, by the time they part, he/she might ask the new acquaintance's name again, which is because he has forgotten, and before asking he might be afraid that the new acquaintance, might feel bad, that he has forgotten, whereas if he has repeated the name several times in a corner, when he first told him, he would have learnt the name. Onyechere (2004) gave a detailed and encompassing analysis of study skills acquisition therapy

maintaining that, to excel in examinations without fear, the client need to work harder and work better, revise early, revise regularly with the confidence that breeds successes, obey the rules and regulations of examination for success.

Similarly Okoye (2006) in his submission opines that inadequate preparation, precipitates most fears in examination and the solution to it is diligence and avoidance of procrastination. Diligence; for Hornby (2000) means persistent efforts. Thus, for a student who persistently studies his books, without postponing, fear is usually at a distance, which Okoye (2006) further elaborated, that if a student equipped with stuff and facts, the fear of failure will disappear from him, but rather may develop the spirit of faith and self-confidence to pass his examinations. Sarason (1984) in her theory concurred that the low performance of students with test anxiety stem from the deficient knowledge of the school material and their awareness that they are not well prepared for the test. This therefore portray that the students' performances could be reduced because they lack study skills. Thus, the question is, in a group counselling process if Study Skills technique is adopted can it be effective on reducing test anxiety?

### **Concept of Test**

Hoffman (1994) refer to test as a word usually used to describe a systematic procedure for obtaining a sample of student behaviour and whatever name you use, test, assessment, examination, all rely on the same basic

technology. In the opinion of Afigbo (1997) test/examination, is the process of finding out how much of what is taught in school has actually been assimilated through the evaluation of the depth of knowledge acquired in theoretical and practical terms, so as to ensure that those who profess to have certain skills and knowledge actually possess them.

That is to say that test/examination is a time of demonstration of abilities of students, by which high scores means high level of knowledge and skill, while a low score means low level of knowledge.

### **Concept of Anxiety**

Anxiety which is derived from the latin word 'angere', means to choke, or strangle. Heering (2009) further noted that anxiety disorder involve an excessive or inappropriate state of arousal, characterized by feelings of apprehension, uncertainty or fear. To this Sarason (1984) stated that most students experience some level of anxiety during an examination and when the anxiety begins to affect examination performance, it becomes a problem. These mean that anxiety can hinder performance as available literatures reveal that they make it hard for the examinees to think straight and to recall information that they need, which can also affect people in every field of life.



## **Concept of Test Anxiety**

Segmit (2004) pointed out that test anxiety entails uneasiness or feeling unprepared prior to a test, especially an important one, stressing that the problem is more serious for a great many others who suffer from lack of confidence, dread, fear and inability to concentrate while taking an examination. Smith (2008) concurred that test anxiety involves some people drawing a blank, when it comes to facts and figures they have studied and otherwise know. Bourne (2000) have earlier pointed out that test anxiety is the uneasiness, apprehension or nervousness felt by students who have fear of failing an examination pointing out that though the term test anxiety refers specifically to students reaction to test/examination, that many adults share the same experience with regard to their career or profession.

Bower (2008) opined that test anxiety is actually a type of performance anxiety; where the pressure is how to do well. Going further to highlight that it is a situation where one has participated in class, done all the homework, and think he has a grip of the material but on the day of the examination/test the person blanks out, freeze up, zone out or feel so nervous that he cannot get it together to respond to the questions. Smith (2008) concurred that test anxiety include the feelings of apprehension or dread, trouble concentrating, feeling tense, anticipating the worst, irritability, restlessness, watching and waiting for signs and feeling that the mind has gone blank and scary.

That is to say that test anxiety is that nervous feeling that people sometimes get when they are about to take a test/examination or when they are in the examination or after taking the examination/ test.

Thus Dryden (1998) pointed out that it is pretty normal to feel a little nervous and stressed before a test, that almost everyone does, with a touch of nervous anticipation that can help one get revived and keep one at peak performance while taking the examination, but that for some people this normal anxiety is more intense, that the nervousness they feel before, during and after a test can be so strong that it interferes with their concentration or performance.

However, Sarason (1984) divided test anxiety, into four dimensions, worry, tension, test-irrelevant thinking and bodily symptoms. While Spielberger (1997) made reference to Liebert and Morris (1967) as having used a two dimensional conceptualization to define test anxiety as consisting of two major elements, worry and emotionality. Wine (2002) claimed that negative influence of test anxiety is due to the fact that persons with test anxiety divide their attention between personal variables and variables connected to the task, which is in contrast with non-test anxious persons, who are able to focus their attention more on the task itself, and that this differences lead to a reduced ability to deal with cognitive tasks among students with test anxiety.

### **Concept of Worry**

In another angle, Tobias (1985) in his research has proven that students with test anxiety see the test situation as threatening and often react by worrying and thinking irrelevant thoughts that interfere with effective performance. Going further, Mathew (2008) pointed out that worry could result in the tendency of having difficulty reading and understanding the question on the examination paper, nervousness, having difficulty organising their thoughts.

These go to say that such students do not feel normal, once the test situation is presented before them, and the tendency will be to avoid the situation and its circumstances, which makes the academic environment uncomfortable for them.

### **Concept of Signs or Symptoms of Test Anxiety**

However, researchers, like Mitchel (2009) posited the physical signs of test anxiety to include, sweaty palms, headaches, perspiration, stomach upset, tense muscles, rapid heartbeat, going further to point out its effects as; having difficulty reading and understanding the question on the examination paper, nervousness, having difficulty organizing their thoughts. Bower (2008) concurred by enumerating the physical signs of test anxiety as thus, sweaty palms, stomach upset, headache, rapid heartbeat, and many more and the effects of test anxiety as nervousness, having difficulty organizing their thoughts, mental block, going blank on questions and many more. Goliath (2004) described students with test anxiety as being characterized by acquired

habits and attitudes that involve negative self perceptions and expectations and these self deprecating habits and attitudes disposes them to experience fear.

### **Concept of Adolescent**

Uwakwe (1998) pointed that Adolescence is a period of transition from childhood to adulthood, that it is probably the most challenging and tasking phase in the developmental process of human beings. Thus, Beck (1996) asserted that adolescents struggle to cope with these changes and may develop emotional disorders, such as phobia, depression and anxiety.

And these challenges which are often traumatic to majority of people, according to Denga (1988) come from the fact that the adolescents are faced with the task of biological, sexual and physical developments. Thus as the adolescents pull out in search of identity, and the peer group takes a special significance, and as the members of the peer often attempt to behave alike, dress alike, participate in the same activities, especially in early adolescence. Jerkins (2002) pointed out that adolescents demonstrate behaviours consistent with several myths; with the first myth being that, the adolescents are “on stage” with the attention of others constantly centred upon their appearance or actions, the Second myth being the indestructible self; stressing that there is a strong need for peer approval. That many adolescents are at risk for depression and anxiety due to pressures and conflicts that may arise within families, school or social organizations and relationships. These mean that if adolescents appear to be isolated from peers, uninterested in school or social activities or

deteriorating in performance at school, work, or sports, psychological evaluation may be necessary. To this, Anseneault, Cannon, Wilton and Murray (2004) asserted that pressure to do well and to pass examination by the adolescents may come from the parents or teachers, but adolescents usually want to do well and will push themselves. And that, examination though is important should not be allowed to dominate life or to cause unhappiness, as this according to him gets to the point of making the adolescents become depressed because they cannot do well as they would want to do.

However, in recognition of the unique psychology and neurology of adolescence, distinct from the literacy development of adults, the international reading Association (IRA) as reported by Patterson (2008) has outlined seven guiding principles of literacy development of the adolescents, and these principles are required by the adolescents to become motivated with the skill of reading.

This means, the adolescents have the ability to learn how to share intimacy without inhibition or dread, establishing and maintaining satisfying personal relationships and gradually move towards a more mature sense of identity and purpose. However, the onset of adolescence differs from culture to culture and Awka South Local Government Area is not left out, being a period when great changes occur in all developmental dimensions of the individual. For instance for the benefit of the adolescents and the society in 1977 an enlarged program me was enacted by the federal government of Nigeria

towards sustaining a better future for the adolescents and the society. Thus a World Health Organization (WHO) publication in (2000) recommended that successful strategies should treat youth holistically and start at an early age to offer youth a variety of growth and development, opportunities. That we need policies, legislation, programs and services that address the root causes of adolescent problems, education, and unemployment, improve adolescent environments through schools, Community and Family. Hence, the disastrous effect which unguided and non counselled adolescents pose to the society and even to themselves matters to the citizen at large and even the government.

## **Theoretical Framework**

### **State Trait Anxiety Theory**

One of the best known theoretical models of anxiety is Spielberger's (1972) theory of State trait anxiety which postulates two distinct anxiety constructs; state and trait. State anxiety according to Spielberger (1980) is conceptualized as an unpleasant emotional arousal in the face of threatening demands or dangers, characterized by tension while trait anxiety is conceptualized as relatively stable individual differences in anxiety proneness. This Lazarus (1991) linked the Cognitive appraisal of threat to a critical factor for the experience of state anxiety. Thus at the level of both state and trait anxiety Spielberger (1980) made a distinction between worry and emotionality which are the two major components of test anxiety. According to Spielberger

(1980) worry involves being concerned with the outcome of a test, especially the consequences of failure.

However, persons who are high in test anxiety tend to perceive evaluative situations as personally threatening, apprehensive, nervous and emotionally aroused, (Davis, Esielman, Mickay, Winemiller, 1997). Speilberger (1980) opined that the negative self centred worry conditions that student with test anxiety experience distract their attention and interfere with their concentration during examination.

### **Gestalt Theory**

Along with Kohler and Koffka, Max Wertheimer a German Psychologist was one of the principal proponents of Gestalt theory, which emphasized higher order cognitive processes in the midst of behaviourism. The focus of Gestalt was the idea of grouping. Wertheimer was especially concerned with problem solving. Gestalt theory applies to all aspects of human learning. Among the principles of the theory are\_

- The learner should be encouraged to discover the underlying nature of a topic or problem.
- Gaps, incongruities or disturbances are an important stimulus for learning.
- Instruction should be based upon the laws of organization, proximity, closure, similarity and simplicity.

Hence, the main factor in Gestalt theory is development of insight. The proponent sees human anxiety as a normal experience of the conflict between man's needs and his attempt to reach equilibrium. As long as need is not met there will be conflict in the individual. Learning according to Gestalt psychology is a continuing process where humans gather objective pieces of information and feel in the gap to make a whole. From the Gestalt philosophy Fritz Perls developed what is today known as Gestalt therapy, which is a process that attempts to address the problem of incomplete Gestalt, in the lives of people. Gestalt therapy attempts to guide individuals into a state of growth and maturity through an emphasis on self, its ultimate goal being that each individual reaches states of completed Gestalts in his life. That an individual can only reach higher states of self actualization by embracing self responsibility relying less on others and integrating one's own part into a greater self whole. The one common element in all of Gestalt's therapeutic forms is awareness. Therapist directs their clients to make content with their environment; their surrounding and their feelings simply to touch reality as it exist right now in the present. Gestalt therapy's insights for learning among others include –encouraging personal responsibility for learning, encourage learners to see themselves in new ways, for example to envision oneself as a leading expert in the topic.



## **Cognitive Behavioural Theory**

The phrase Cognitive-behavioural, an unwidely conjunction of two unlikely sounding complementary parts, first came into usage in the 1970's in the work of Meichembaum (1975). This was confirmed by Patterson(1991) when he asserted that two important development in particular are important for the ultimate emergence of Cognitive behavioural theories; First, the advent of behaviour therapy and the development of social learning theory.

But another source of influence in the opinion of Moon and Eisler (1983) that was important in the final appearance of Cognitive-behavioural ideas, was work being carried out by psychotherapists, who he said came to recognize the importance of cognitive processes and especially self belief and other internal self referential thought patterns in the generalization and maintenance of Psychological problems and their eventual remediation. This Smith (2008) analyzed that from behaviourism and behaviourally orientated research these writers took a number of key principles thus the possibility of changing behaviour gradually and the universal importance of monitoring and evaluating the behaviour including retention (durability). Which is the bedrock of the techniques; Self Instruction, Self Monitoring, and retention test in this work.

Smith (2008) went further to point out the value of self reports, attention to the crucial part played by language and self-referent inner speech and the recognition of the centrality of cognitive processes in self-regulation and self perception. These show that these concepts provided a powerful new approach

to understanding the complex dynamic relationships between thoughts, feeling and behaviour. Hence, Becks (1996) observed that Cognitive Behaviour Theory (CBT) describes numerous therapies that all have similar approach to solving problems , and works by changing people's attitudes and their behaviour focusing on images, thoughts, beliefs and attitudes that people hold and how it relates to the way they behave and also their way of handling emotional problems. Meichenbaum (1995) earlier pointed out that Cognitive behavioural therapy help one to change how he/she thinks which is cognitive and what he/she do which is behavioural. These suggest that Self Instruction Technique is imbedded in the Cognitive behavioural theory which in a therapeutic process aids, bring about a real change that goes beyond feeling better, while the client is in therapy. Hence, Cognitive Behavioural theory is the core theory of this study. Thus for Becks ((1996) Cognitive behavioural therapy empowers people to grab firm of their own thought process and fix the mental mistakes they make, that leads to their having problems. Thus for Burns (1998) It is worthy to mention that the therapies embedded in this theory can be applied in helping people overcome anxiety disorders, like obsessive compulsive disorder, panic disorders, phobias and many more.

## **Self Monitoring Theory**

Self monitoring theory was propounded by Mark Snyder in 1974. The theory involves the process through which people regulate their own behaviour. However, for Dombeck and Wells-moran (2004), self monitoring involves the client's ability to learn how to pay careful and systematic attention to his problems, behaviours and habits and to the stimuli that trigger them. Going further to point out that self monitoring is at its best, when is approached in a primarily quantified way, that is deciding what behaviours or habits, counting the occurrence of each and every behaviour with a self measuring system.

This means, that the client will have a system in place to self monitor well, describing what you will monitor like in this research, test anxiety, the behaviours and triggers, how often you will monitor and how observation will be recorded, or the client can decide to count events regularly after some amount of time has passed or the evening after the day's work. This puts to play, observation and its influence on learning as earlier reviewed, for instance an individual may be sad after a difficult test, but when he observes others wailing openly he may eventually weep.

## **Personal Construct Theory**

Propounded by George Kelly in 1955, according to Fransella (1996) Kelly, explicitly set out to replace the models of the person adopted by behaviourism, the Psychoanalysis, with the model of man as a scientist,

Going further Fransella (1996) pointed out that the formal content of personal construct theory includes the fundamental postulate that a person's processes are psychologically channelized by the ways in which he anticipates events. Thus, Personal construct theory's predominant focus remains on the study of individuals, families and social groups, with particular emphasis on how people organize and change their views of self. Neimeyer and Bridges (2004) Giving instance of people experiencing anxiety when confronted with events that seem almost completely alien and uninterruptable within their previous construct system. However, for Neimeyer and Raskin (2001) personal construct theory, as an approach to Psychotherapy, stresses the importance of therapist making a concerted effort to enter the client's world of meaning and understand it from the inside out as a precondition to assist.

## **Empirical Studies**

### **Empirical Studies on Self Instruction Technique**

From the numerous literatures, one will see that Self instruction therapy aims to give clients control over their behaviour through guided self talk that gradually becomes self generated. Several studies have been conducted using Self instruction technique and most of the results show that it is effective while some show ineffective results.

Baker (2003) carried out a study on the effects of preventive cognitive self instruction training on Adolescents attitudes, experiences and state anxiety.

Here the effects of teacher-directed cognitive self instruction (TI) were compared with an instruction – only (IO) component control condition in order to examine the former's efficacy as primary prevention strategy. In a quasi-experimental design, two high school psychology classes of 25 each were randomly assigned to either Ti or IO. Each condition lasted for eight 45 minutes class periods and each group was given a homework assignment. Pre-treatment equivalence and demand analysis yielded no evidence of differences, results of post treatments and pre and post treatment measure of state anxiety suggested that trainer directed cognitive self instruction may be a promising primary prevention strategy. They thus concluded that trainer directed Self Instruction is more effective.

In their own report Haldeman and Baker (1992) used Mechenbaum's 1977, Self Instruction ideas to prepare a primary prevention program designed to help recipients prepare to cope with irrational thinking. Female adolescents attending a boarding school and who volunteered to participate were assigned randomly to a group instruction and Self-Instruction condition, on measure of knowledge about cognitive self instruction and confidence, in the mode of presentation the group condition seemed superior. Four members of the group condition took advantage of an offer for individual counselling, while none of those in the self instructional condition referred themselves. They therefore, came to the conclusion that Self Instruction technique can be applied in a group Counselling setting.

Eisler (1993) carried out a research on the effect of training in Verbal self guidance, on the self efficacy and performance of selective interview, 35 clients received training in verbal self guidance designed to increase self efficacy in a Selection interview. At the end of the training program the trainees who acquired skills in verbal self guidance had higher self efficacy than the participants in the control group, regarding their interview performance they also performed better in the selection interview. Hence, concluded that Verbal Self guidance has higher Self efficacy.

Finally, Wachelka and Katz (1999) examined the effectiveness of a cognitive-behavioural treatment for reducing test anxiety and improving academic Self esteem in a high school and college students with learning disabilities. The students were 27 in number and all of them participated voluntarily. They were enrolled in classes for students with learning problems. Before the study began, they complained of test anxiety and showed an elevated score on the test anxiety inventory, eleven students that is 85%, completed the 8 week test taking skills. Results showed significant improvement in the treated group which was not evident in the untreated control group of 16 students.

Compared to the control group, the treated group showed significant reduction in test anxiety as well as improvement in study skills and academic self-esteem as measured by the survey of study habits and attitudes. They therefore concluded that test anxiety can be reduced using an appropriate

therapy. However, these results extend the generality of similar studies on reducing test anxiety and improving academic self esteem in younger students.

### **Empirical Studies on Study Skills Technique**

Various researches like Kirkland and Hollandsworth ((1980) and many others have proved that Study Skills Technique is effective in handling some behavioural problems. In line with this, a study was conducted by Bates (1980) on the effectiveness of interpersonal skills training on the social skill acquisition of moderately and mildly retarded adults, 16 moderately and mildly retarded adults were selected and randomly assigned to experimental group. They received a seven session interpersonal skills training program. Analyzing the data using means, the result of the training program showed that moderately and mildly retarded adults acquired new social skills as evidenced by performance on a situation role play assessment. Thus, he concluded that social skills can be acquired through skill training.

Neimeyer and Feixas (1990) carried out a research on the role of homework and skill acquisition in the outcome of group cognitive therapy for depression. The study evaluated the effect of home work; assigning 63 carefully diagnosed depressives to one of two otherwise identical 10 week cognitive conditions. And a post test therapy assessment of skill acquisition in completing the core cognitive restructuring technique did predict self rated maintenance of treatment gains six weeks later. They therefore concluded that

the findings reinforce the value of skill acquisition in promoting maintenance of treatment gains once therapy has ended.

In their own study, Gist, Stevens, Bavetta (1999) reported the effects of self efficacy and post training intervention on the acquisition and maintenance of complex Study skills. The study conducted in the University of Washington with 22 students, in stage one, all participants received basic training in negotiation skills, behavioural measures of negotiation performance were taken following this training, in stage two alternative post training interventions were offered to facilitate skill maintenance . Six weeks later, behavioural measures of performance were repeated. Results indicated that pre test efficacy contributed to skill maintenance, self efficacy also interacted with post training method to influence delayed performance. Specifically, self management training increased the self efficacy performance relationship, while goal-setting training enhanced performance differences between high and low self efficacy trainees. They therefore concluded that self management training increases self efficacy, while goal setting training enhances performance.

Again, Kirkland and Hollandsworth (1980) in the journal of consulting and clinical Psychology, reported on the effective test taking skills acquisition versus anxiety reduction techniques, a Skill acquisition treatment for test anxiety was compared with 2 anxiety reduction conditions, eye-controlled relaxation and meditation and a practice only group in terms of improved test performance, 50 highly test anxious students representing the most anxious,



28% of 232 undergraduates administered the achievement anxiety test were randomly assigned to 1 or 4 experimental conditions. The 3 treatment groups received 5, 90 minutes training sessions, while the practice only group was given an equal amount of time in practice on a post treatment analogy test (AT). Results indicate that the Skills acquisition group was superior to the other 3 conditions in terms of performance. The skills acquisition group reported greater knowledge of effective test taking skills and less attention interference during testing than the other groups. They thus concluded that test taking skill acquisition is more effective.

Also, Bielaczye, Pirolli and Brown (2000) reported a study on training in self-explanation and self regulation strategies: investigating the effects of knowledge of acquisition activities on problem solving. This was accomplished by identifying a set of self explanation and self-regulation strategies used by high performance students; strategy training was used to manipulate student's application of these strategies and examined the impact of their use on student explanations and performance. 24 university students with no prior programming experience worked through a sequence of programming lessons. Following introductory lessons, participants received interventions involving explicitly training in the strategies (instructional group) or received a similar set of interventions but no explicit training (control group). Applying Analysis of Covariance (ANCOVA) on the mean scores the results indicate that the particular self explanation and self regulation strategies used in training

contribute to learning and problem solving performance. Hence, concluded that knowledge of skill acquisition on problem solving is proper.

Again Hawkins, Calatano, Gillmore, Wells and Elizabeth (1989) studied skills training for drug abusers: Generalization maintenance, and effects on drug use. Here they reported, that in the study 13 clients in the phase of residential drug treatment programs were randomly assigned to a control group (n=60), or to a 10 week supplemental behavioural skills training course (n=70). 82% of the sample was male, and 75% was white, subjects ages ranged from 15 to 55 years though the majority (71%) was in their twenties. A role play test assessing skill levels was administered as a pre-test, following the 10 week skill training course, and again at 6 and 12 months as follow-ups. The result showed that although skills declined slightly over time, the skill levels of experimental subjects were higher than the control group, 12 months after training. Generalization of skills to role play situations for which no training had been received was also found.

However, with the exceptions of Marijuana and amphetamine use, skills training did not affect drug use after treatment, thus concluded that skill training is only effective on some drugs.

Ozlem (2001) reported a study on skills acquisition in carpentry and car repair workshops, the study was reported as describing a study of income generation and vocational skill acquisition in small workshops. Car-repair and carpentry workshops were chosen as the local point of the study, which

involved collecting data on 88 master craftsmen, 55 journey men and 38 apprentices. In addition in depth interviews were conducted with the carpentry and car-repair artisans. The descriptive data from the survey study show that the artisans are in general migrants and primary school graduates, who usually acquire their vocational skills on the job. The analyses of the interviews suggest that the apprentices, journey men and masters in the car-repair and carpentry trades are content with their Vocational skills acquired on the job. Thus concluding that given skill training in an on the job setting effective skills can be acquired.

Wright (1985) carried out an exploratory study on intercultural post graduates learning the acquisition of study skills: An institutional response to the results of the research. Using an ecological theoretical model from developmental Psychology forty eight adolescent students, she considered cognitive tasks as interactive settings and using this methodology, he investigated how the students acquired the study skills required for their academic course. And the result of the study resulted in instructional changes. Thus, concluded that Study Skills can be acquired.

### **Empirical Studies on Test Anxiety**

Numerous case studies have been reported of people suffering from test anxiety and reports show that the study of test anxiety started as far back as 1920's. But the latest research on anxiety according to Hendrick (2009) in the

National Institute of Mental Health, is on the cause, prevention and treatment of anxiety disorders which are going on, involving how family background (Genetics) and life experiences put a person at risk for these disorders. The result according to Hendrick is still in the pipeline.

However, Egbochukwu, Obodo and Obadan (2008) carried out a study on the Efficacy of Rational emotive behaviour therapy on the reduction of test anxiety among adolescents in secondary schools. The study was quasi experimental in nature, two independent variables were involved in the study but the independent variable of interest was Rational emotive therapy (RET). A sample of 125 students were selected and using Spielberger test anxiety inventory 80 test anxious students were selected, who went through treatment using RET and the result showed that treatment and entry test anxiety level have many effects on the test anxiety level of students at the end of treatment. Hence, came to the conclusion that test anxiety can be reduced in adolescents using rational emotive therapy.

Ifegwazi (2008) in another angle carried out a study on the roles of gender, age and level of study on test anxiety among undergraduate students, where 294 students participated in the study. Immediately before examination Spielberger's test anxiety inventory was used to get the level of students test anxiety. And results show that there were no significant main effects of gender, age and level of study on test anxiety thus concluded that test anxiety is a common reaction that does not mind age, gender and level of study.

However, at Bharatya Vidya Bharan India, the School Counsellor according to Joomla (2009) tried to root out the test anxiety from young minds by explaining the real facts with the help of a persuasive power point presentation. The presentation which was conducted at the school auditorium to packed zealous audience of 24 adolescents in number, commenced with the causes that evoke fear and tears on hearing the word test or examination, making the examinees feel rebellious about the system of examination. The counsellor elucidated the various ways to successfully overcome the examination anxiety by planning out the work and working out the plan students were guided to formulate a plan to do away with the irrational fear of examination. The Counsellor also analyzed the pros and cons of various learning methods, such as group study, self study and counselled the learners to choose a method that suits them best. Thus, the presentation ended on a positive note, as the young learners became confident to reach their cherished goals, defeating all stress and fears. Thus concluding that in a group Counselling student can learn to envisage test without panic or feeling distressed.

In a study, Hall (2006) carried out a research, titled; Is test anxiety a form of specific social phobia, the study was designed to determine if test anxiety is a type of specific social phobia. 57 subjects completed a battery of self-report measures, underwent a semi structured interview and participated in a behavioural assessment task. Results showed that test anxious individuals were

similar to socially phobic individuals in personality characteristics, in subjective ratings of phobia as well as in the prevalence of feared situations. However, despite these similarities, test anxious individuals did not show significant functional impairment during the behavioural assessment task as evaluated through level of performance, number of negative cognitions and Psycho physiological reactivity. Based on these results, the researcher concluded that test anxiety cannot be considered a type of specific social phobia.

Vanessa (2006) carried out a study on reducing math phobia and related test anxiety in Geology class for non science majors, pointing out that math and test anxiety are common in science classes for non-science majors.

Thus formative assessment was used to prepare 50 students for examinations. This included weekly quizzes that were challenging, graded harshly, and completely correctable. And by the midterm 100% of the students mastered rate calculations and when retested at the final, 80% of the students retained the ability to solve the rate calculations, students also reported feeling less math phobic, thus concluded that math phobia and test anxiety for non science majors can be reduced.

Onwuka (2008) carried a research on the relative effectiveness of three counselling therapies; Implosion Assertive training and systematic desensitization on reducing test phobia among polytechnic students, using 80 students who were test phobic, identified through response on a phobia

ascertaining inventory administered to the students. And the result of the study showed that the three counselling therapies showed therapy effect both at post test and follow up, but systematic desensitization was the most effective therapy, while assertive training was the least effective thus concluded that the three techniques are effective on reducing test anxiety, with systematic desensitization being the most effective.

Similarly, Johnson and Sechrest (1986) carried out an experimental study, where they attempted to reduce the fear of test/examinations in a group of 25 college students using systematic desensitization received significantly higher grades on their final examination in a Psychology course than did the groups of control subjects who were also taking the course but who received either no treatment or relaxation alone. Hence, concluded that Systematic desensitization can be used in a group counselling to reduce test anxiety.

Furthermore, Fitzpatrick (1999) reported that in a study conducted by the National Institute of mental health 5.1% - 12.5% of Americans are hit with different forms of anxiety and phobias, the design was a survey type using both men and women of about 250; 125 each, in number, using percentages. According to the report, they are the most common psychiatric illness among women of all ages and are the second most common illness among men older than 25.

In another angle Okoye (2001) studied sources of anxiety for male and female undergraduates. One research question and three hypotheses were

formulated for the study which is a survey design; the purpose of study was to identify areas which provoked the highest anxiety level in students and the result indicated that the highest anxiety level in students is provoked by passing examination and making good grade. She therefore concluded that test anxiety provokes the highest level of anxiety among students. In a research of 82 adolescents, Swanson and Howell (1996) noted a significant positive relationship between test anxiety and Cognitive interference and a significant negative relationship between test anxiety and study habits. And based on these results, they concluded that Cognitive interference was the most powerful prediction to test anxiety.

Various Studies have attempted to reduce test anxiety among students with learning disability for instance; Wachelka and Katz (1999) tried to lower test anxiety levels in 80 high school and Junior college students with learning disability. After eight weeks of Cognitive behavioural treatment their participants demonstrated reduced test anxiety levels and improved study skills and academic self esteem compared to a control group. And their Cognitive behavioural treatment included progressive muscle relaxation, guided imagery, self instruction training and training in study and test taking skills. Thus, concluded that using a cognitive behavioural treatment that test anxiety can be reduced.

Goliath (2008) carried out a research on test anxiety and its effects on the personality of students with learning disabilities, the purpose of Study being to



look for personality variables that characterized young adults with learning disabilities and test anxiety. 54 adults diagnosed with learning disabilities participated in the study, 24 of them were diagnosed as having test anxiety, The results showed significant differences between the two groups on 35 out of 68 measures, and also showed that college maladjustment explained most of the variance, and further analysis, assessed the various test anxiety profiles of the two types of test anxiety, emotionality and worry. Hence, concluded that maladjustment explained most of the variance and is in line with Spielberger's emotionality and worry of test anxiety.

### **Summary of the Literature Review**

In the Literature review done, the researcher carried out the review of related literature by setting out the sub headings under which the review would be made. Conceptual frameworks were written on the independent variables; Self Instruction Technique and Study Skills Technique, and on the dependent variable; test anxiety, also on Adolescents, which were all defined. For instance, Self instruction therapy like Socrates "know thyself", Study Skills like "familiarity brings contempt", while anxiety is irrational fear or distress about test or examination. Throughout history and across the culture, self knowledge has been recognized as a major component of the truly mature enlightened person and simultaneously, as a royal road to ultimate fulfilment.

The researcher went further to review the theories under the State trait anxiety theory, Gestalt Theory, Cognitive Behavioural, Personal Construct and Self Monitoring Theories. Commenting on their effects and their relationship with the dependent and independent variables of this work, empirical Studies conducted by various experts and researchers on Self Instruction and Study Skills Techniques and Test Anxiety were reviewed.

Apparently, from the review conducted, one will deduce that not much research has been done on test anxiety using Self Instruction and Study Skills in the Nigeria psychological literature. This implies that experts have not actually addressed much of 'test anxiety' using these therapies. Although, experts concur that the techniques, Self Instruction (SIT) and Study Skills (SS) can reduce maladaptive behaviours and anxiety related problems. But these techniques from the available literatures showed that they have been used severally in other areas, with few specifically on test/examination.

Hence, the key is not only to teach students how to study but also to get them to put to use what they learn. And an effective program therefore must be concerned not only with teaching, reading and study strategies, but also with developing the attitudes, beliefs and values that shape how students use those skills. Therefore, in this research work the researcher applied the therapeutic processes of self monitoring, thought stopping and then self instruction, and in another angle application of the study and examination skills.

## **CHAPTER THREE**

### **METHOD**

This chapter discusses the research procedures employed in this study under the following subheadings

Research Design

Area of the Study

Population of the Study

Sample and Sampling Techniques

Instruments for Data Collection

Validity of the Instrument

Reliability of the Instrument

Method of Data Collection

Experimental Procedure

Control of Extraneous Variables

Training of Research Assistants

Method of Data Analysis

#### **Research Design**

Quasi experimental research design was employed in this study. Bearing in mind that Ali (1999) pointed out that quasi experimental research design could be used in a school setting where it is not always possible to use pure experimental design which they consider as disruption of School activities.

Many quasi experimental methods are available but the one employed in this study is the non randomized pre test-post test control group design.

Here three groups of subjects are involved, two experimental groups and one control group. All of them were pretested. The two experimental groups received treatment on test anxiety using the two counselling therapies Self Instruction and Study Skills respectively, while the control group received theirs from their school guidance counsellor. Then on three different settings the three groups were post tested and retention test also administered.

**Table 1**

**Non Randomized Pre test-post test control Group Design**

	Group	Pre test	Treatment	Post test	Retention test
NR	E1	O <sub>1</sub>	X <sub>1</sub>	O <sub>2</sub>	O <sub>3</sub>
NR	E2	O <sub>1</sub>	X <sub>2</sub>	O <sub>2</sub>	O <sub>3</sub>
NR	C	O <sub>1</sub>		O <sub>2</sub>	O <sub>3</sub>

**Key**

NR - Non Random Assignment of treatment to the groups

E1 - Experimental Group one – School A

E2 - Experimental Group two – School B

C - Control Group – School C

O<sub>1</sub> - Measure of the dependent variable before treatment

- X<sub>1</sub> - The experimental or independent variable (SIT)
- X<sub>2</sub> - The experimental or independent variable (SST)
- O<sub>2</sub> - Measure of the dependent Variables immediately after treatment
- O<sub>3</sub> - Measure of the dependent variable 3 months after treatment

The control group received their usual counselling in the school.

### **Area of the Study**

The study was conducted in Awka South Local Government Area of Anambra State, focusing on all the JS2 Students in all the Secondary schools in Awka South Local Government Area.

Awka South is made up of ten towns, with eighteen secondary schools. The life of people in Awka South Local Government area dwells more on trading. Being a local Government Area in a State capital the inhabitants are more of traders and civil servants, where many parents as civil servants and traders leave their house early and return in the evening and may not be aware when a child is away from school in the bid to avoid test as a result of distress for test, especially during examination period and in this era of continuous assessment. Studies indicate that there are a greater number of commercial buses, drivers and motor conductors made of school age children, plying the Government houses and its environs. (Nnebe 2010).

## **Population of the Study**

The population of this study is 369 JS<sub>2</sub> secondary school students with test anxiety in all the secondary schools in Awka South local Government area of Anambra State. This population was gotten from the result of the pre test administered to all the JS2 students using Speilberger (I980) test anxiety inventory. (TAI)

## **Sample and Sampling Technique**

The sample for this study is 107 JS2 secondary school students who exhibited test anxiety in the three purposively selected Secondary Schools in Awka South Local Government Area. The three schools are all in Awka South Local Government Area and are referred in this work as school A, school B and school C. School A is located in Okpuno, while school B is located in Awka and school C in Umuokpo. In fact their locations are in opposite directions, which take care of the extraneous variable on interaction of the groups, bearing in mind the need for the groups to be away from each other to avoid interaction of the experimental groups or interaction of the experimental groups with the control group.

Furthermore, non random sampling was used in assigning treatment models to the three groups. To which JS2 students with test anxiety in School A were sampled as the treatment group one using Self Instruction Technique, while JS2 students with test anxiety in School B were sampled as group two

using Study skills technique while JS2 students with test anxiety in School C served as the control group.

### **Instruments for Data Collection**

The instrument used in this study is the test anxiety inventory (TAI) originally developed by Spielberger (1980), and validated for use with Nigerian Sample by Omoluabi (1993). The instrument was designed to measure anxiety in test, which was adopted by the researcher for this study. The inventory was specifically used in this present study to measure the test anxiety levels of adolescent students facing continuous assessment. The test anxiety inventory consists of 20 items and each item is scored on a 4 point scale ranging from 1 – (almost never) to 4 – (almost always). The inventory provides scores on three components of test anxiety: Worry (W; 8 items), Emotionality (E, 8 items) and Total (T; all the 20 items). The total scale comprising all the 20 items were used in this present study.

For scoring purposes the TAI manual according to Speilberger(1980) indicates that there is direct scoring and reverse scoring of the items.

Question one is reversed scored that is 4,3,2,1, while the remaining 19 items are scored in a direct fashion 1, 2, 3, 4. The instrument was made in three; A, B, C, Option A was used for pre-test; Option B; post test, and Option C; retention test.

### **Validity of the Instrument**

The test anxiety inventory (TAI) used for this study has been used extensively in both clinical practice and research, with Nigerian Samples, for instance, Omoluabi (1993), Obiora (2004), Egwu (2004) and many more. The instrument has been validated in numerous studies for use in Nigeria (Omoluabi 1993). The norm as interpreted by Omoluabi (1993) for Nigeria students the limit is 34.77 and 34.37 for male and female respectively. Hence, the instrument was approved by experts in the department of Guidance and counselling of this University and was therefore adopted by the researcher.

### **Reliability of the Instrument**

The manual for the Spielberger (1980) test anxiety inventory used in this research shows that Alpha coefficients for the 3 scales, Worry, emotionality and total (WET), have been reported for Male and Female American Samples as follows: -

Worry = .88, Emotionality = .90, Total = .94, for males and Worry = .90, Emotionality = .91, total = .95, for females.

Omoluabi (1993), reported test retest reliability coefficient values for both Male and female Nigerian samples as follows: -

Worry (W) = .73, Emotionality (E) = .79, Total (T) = .80, after 72 days interval of administration.



## **Method of Data Collection**

The establishment of a baseline before treatment is of paramount importance in behaviour modification. This gives direction to the study and helps the researcher in ascertaining if treatment is effective or not. Therefore the entry anxiety level of students was considered, using the pre test. This enabled the researcher in establishment of the baseline for this study and also showed if it has any effect on the treatment and final test anxiety level of the subjects.

The treatment programmes are two types-

1. Self Instruction group
2. Study Skills group

Based on the result of the non random sampling for assigning treatment models; Students in School A = Self Instruction group.

Students in School B = Study Skills group

Students in School C = Control group

The treatment was administered on all the JS2 students with test anxiety in school A and school B using Self Instruction and Study Skills techniques respectively in their group counselling process by the researcher, while the control group was counselled by their school counsellor using other ways, different from the two techniques. The Counselling period for SIT and SST was one session per week respectively, each session lasting at least 40 minutes,

for 6 weeks which was during the class counselling period as agreed with the school guidance counsellors.

The Control group received their counselling from their school counsellor (research assistant).

At the end of the counselling period, a post test was administered to the three groups. Three months later a durability test was given to the treatment groups to verify if the effects of the treatment were durable.

### **Training of Research Assistants**

The counsellors of the three schools are the Research assistants for this study and were trained on collection and administration of data. The researcher visited the three schools within three days. The training was done within the three days, one day each for the guidance counsellors of the three schools. The researcher familiarized herself with the counsellors explaining the purpose of her research and what the counsellors, the students, including the school would gain from the research. The training was on how to administer and collect the pre, post and retention tests. The researcher emphasized that answering the questions on the inventory is not timed but rather the students should be given sufficient time to complete the inventory and sentences that the students didn't understand should be explained orally. The inventory was administered prior to the students' continuous assessment.

## **Treatment Model I- Self Instruction Technique**

**Approach:** Self Instruction therapy

**Theory:** Cognitive Behavioural theory (Meichenbaum)

Self monitoring theory (Mark Sydney)

**Skills:** Self Monitoring, Thought stopping, Rapport, Questioning, Clarification, Explanation, Restating content, Observation and homework.

**Materials:** The Researcher, students, books, sheets of paper, chalkboard etc

**Mode:** Group counselling

**Recipients:** Secondary school students in JS2 with test anxiety in Awka South Local Government of Anambra State.

**Duration:** Six weeks, once a week, each session lasts for 40 minutes.

**Objectives:** - To educate and help students get rid of test anxiety,

- To develop positive thoughts that replace negative thoughts.
- To overcome the thoughts that provokes test anxiety by stopping such thoughts.

Hence, the goal of this treatment is to help students overcome or reduce their test anxiety using self Instruction therapy. The therapy is aimed at eliminating students' test anxiety behaviour and thoughts, by making the clients learn how to pay attention to their problems behaviour and habits, and replacing them positively.

**Structure:** The treatment is on helping the students identify and learn how to recognize thoughts that provoke their anxiety before, during and after test using

self monitoring, stopping the negative thoughts with the process of thought stopping and building positive thoughts to replace such negative thoughts. These thoughts are meant to be rehearsed with constant practice, in order to make it a habit. Initially, the command could be said loudly as time goes on it is said softly, quietly and finally internally.

### **Procedures:**

#### **Week I- Orientation**

**Step I:** The Guidance counsellor of the school introduced the researcher to the students. The researcher, informed students that she is a resource person invited to discuss some issues with them. She introduced herself as Mrs. Obi Joy Sylvia, from Nnamdi Azikiwe University, Awka and invited students to introduce themselves one after another. The students responded and introduced themselves one after the other. At the end, the researcher introduced the programme and the period it would take to complete. She went on to explain the problems the program was intended to solve by informing the students that their answers to the inventory given them earlier revealed they go through funny experiences during examination or test period which should not be since test or examination is a normal activity to students. To help the students understand the problem, the researcher explained that some students encounter worry and emotional distress before, during and or after examinations to the point that sometimes their brain goes blank and they freeze out which invariably affects their performance in the examination. She explained further

that some students with the type of experiences often prefer assignments to examinations and tests and are being referred to as dull students when they are not. Finally, she informed the students that the problem she presented to them is called test anxiety and that her program with them was aimed at reducing or stopping it.

**Step 2: Description of Therapy:** The researcher informed the students that they will learn how to understand, regulate and monitor their negative thoughts that precipitate the anxiety. She told them that they are expected to learn how to build up positive thoughts to replace the negative thoughts, the goal being to enable them perform better in their examinations, adjust their thoughts before, during and after a test/examination and improve in the task they were not comfortable with. The researcher told the students that their thoughts were part of the causes of their anxiety and that people with test anxiety are usually those with negative thoughts towards test. She explained further that in the programme her main target is to ensure they don't allow themselves to be weighed down by such negative thoughts, so as to perform well in test situations. She further assured them that the exercise will aid them to see test or examination as a normal process they should not be worried about and a normal phenomenon they should accept as part of their school training of which they should develop positive thoughts. The researcher continued to explain to the students the effects and consequences of text anxiety on both students and teachers as a problem behavior including its impact on their social and

academic lives. She however assured them that with their co-operation, what they will benefit by the end of the program me, will enable them learn how to self evaluate, monitor and give self instruction to their problem behaviours and be able to drop them and have a change of perception on test/examination.

**Step 3:** The researcher informed the students that test anxiety leads to low performance in examination/test, and could make one to be sad and moody because in a situation where one has participated in class work and did all of his home work and studies very well and thought he has a grip on the materials, then on the day of the test he suddenly blanks out, freezes up, zones out or feels so nervous that he cannot get all together to respond to those questions he knew the answers the previous day . This invariably makes a bright and intelligent scholar under normal circumstances to be classed as unintelligent scholar and jeopardizes his chances of being appointed into sensitive positions such as prefect or head boy in the school. It could also cause permanent social injury on the person and this manifest whenever he is called to make public address or give a talk, or perform on stage or appear for interview and could on the long run culminate to dropping out of school, the researcher elaborated. The researcher agreed that it is normal to feel a little nervous and stressed before a test but emphasized on the importance of a counseling programme which she believed can actually help one get revived and improve performance on test and examinations. The researcher advised the students to feel free, and follow all

the instructions during the sessions assuring them of all they will benefit after the whole exercise.

**Question Time:** This was the best interaction period when the researcher gave the students opportunity to ask questions of which she responded to their satisfaction.

**Closure:** Before the closure of the day's session, the researcher gave the students home assignment in which she tasked the students to list out thoughts they usually experience during tests and examination periods and bring them for discussion during the next session. The students responded affirmatively and departed.

## **Week 2- Listing and Identification of negative thoughts to be monitored**

**Step 1:** The researcher welcomed the students, made routine roll calls of the students and asked them to enumerate what she discussed with them the previous week. The students were expected to narrate what she taught them about the consequences of test anxiety.

**Step 2:** The researcher called out the students one by one to read out what they have written on the assignment. The researcher identified individual comments from students which she grouped according to specific expressions of test anxiety under bodily reactions, thought disruptions, general test taking anxiety including the sources and analyzed them under student's concern about other people's view about them for poor performance, self image, future security,

concerns about their future security, concerns about unpreparedness for a test, worry about bodily reactions, worry about performance, worry about possible negative consequences. This grouping exercise helped the researcher to identify student's individual problems which aided her for the counselling process with the students.

**Step 3:** She explained to them that these behaviors or thoughts are the things that make ones attitude and thought about test to be above the level of the expected anxiety during examination, which makes one to be nervous and invariably affects one's performance negatively. Therefore, they are the thoughts students need to learn how to monitor by themselves, from time to time. She told them that with practice the self monitoring will be part of them. The researcher then gave the students sheets of paper to write out the different negative thoughts and behavior under the categories she has earlier stated. She then instructed the students to study the

behaviours very well that they are what they will apply for their self monitoring exercise.

**Question Time:** The researcher welcomed questions from the students which she answered to their satisfaction.

**Closure:** The researcher thanked the students for showing interest and for participating in the day's discussion and advised them to keep it up. She reminded them of the assignment given to them, emphasized on punctuality for



the coming week's programme when they will start teaching the process of building up positive thoughts. The students shook and departed.

**Week 3: Developing ways for self monitoring of negative thoughts, thought stopping and building up of positive thoughts.**

**Step 1:** The researcher welcomed the students and commenced on the day's exercise with a roll call in order to determine the level of attendance. After the roll call she made the usual interaction with the students followed by review of the previous week's discussions. She called on the students to present the various thoughts they experience when test is mentioned or before, during or after examination in their categories as classified the previous week. After listening to a good number of them, she praised them for being very good students.

**Step 2:** The researcher then gave the students another sheet of paper and instructed them to put down 'behaviour Self Monitoring sketch' which involved listing out negative thoughts that affected them in the past when test was anticipated. Examples were given such as: worry about performance or unpreparedness for a test, which the researcher expatiated as follows: 'I do not know anything, what's the matter' 'I need to cram before a test' 'I am just a no good worthless person.'

The researcher advised them that whenever they noticed such thoughts in their mind they should say "stop" She instructed them to put down all the negative

thoughts, they remembered and then study their list and check if they could change any of their worrying thoughts and ask themselves the rationality in each thought and how much evidence they have for such belief. She inquired from them if they were able to change their thoughts to something reasonable. The researcher instructed the students to put these positive thoughts down behind each negative thought and also keep a diary of events and situations in the natural environment.

**Step 3:** The researcher sited some examples of real life situations of comments by clients as listed below:-

‘I cannot figure out what the teacher wants - No way I will do well on this test’.

‘I know this stuff yesterday, what is wrong with me – Nothing is wrong with me, I can answer the questions’.

‘My mind is blank – I am just not cut out for this test’.

‘I have to get an A – Smart people always get A’s’.

‘This stuff is not easy – No it is easy, I should get everything right’.

**Worry about bodily reactions/ self image:**

The researcher sited other examples under worry about bodily reactions/ self images as listed below.

‘I am sweating all over- Is really hot in here’. (Bodily reaction)

‘I must really be stupid – no I am not stupid’. (Self image).

‘I know everyone is doing better than me – No I don’t think so’. (Self image)

‘My parents /friends will be disappointed if I score low – none of their business’ (Self image).

The researcher sited other examples under worry about possible negative consequences or future security:

‘If I fail this test; I will be kicked out of school –No way I will pass’

‘I will never graduate on time if I fail – I will pass’.

‘I will never get the kind of job I want if I fail – I will get it’.

‘Knowing that my future depends on test upsets me – no way there is other option and many more’.

**Question Time:** The researcher opened room for students to ask their questions. The students asked their questions which she answered to their satisfaction.

**Closure:** Before closing time, the researcher gave the students routine assignment and told them to outline the events that triggered off their thoughts anytime they experienced them with date and time of occurrence and write them down as she directed. The researcher instructed them to recollect a test taking situation, before, during and after the test; they had in the past and

explain their reactions when the negative thoughts occurred. Finally, she thanked the students for their cooperation and active participation. Departure!

#### **Week 4: Stopping the thoughts**

**Step 1:** The researcher welcomed the students, asked them about their studies and wellbeing and then made roll calls.

**Step 2:** The researcher inspected the students' assignment and guided them in the review exercise of the issues discussed in last episode. The researcher made individual examination of the students on some of the thoughts they experienced during the week. She praised them for the results she obtained from the exercise.

**Step 3:** The researcher enumerated to the students the numerous ways of stopping negative thoughts, such as “shouting stop”, when the thoughts come up, “use of rubber band” and many more. The researcher informed them that for this exercise they were going to use the process of imagination for a test situation and the thoughts, by focusing on the thought while closing their eyes. Then she instructed them to place themselves in a position to interrupt the thoughts and shout “stop!” repeating it with time softly and finally silently. The researcher inquired from the students if they noticed a change in their mood after the shouting process and they responded in affirmative she then advised them to always adopt the method and put them in practice until they've become part of them. If the negative thoughts come again during this time shout “stop”

the researcher continued advising them to be conscious of it, and that with practice they are bound to achieve good results. She also advised them to try to hear themselves and focus on the negative thoughts about test/examination and say stop!

**Question time:** The students were given opportunity this time to ask questions. As they asked the questions the researcher answered them to their satisfaction.

**Closure:** Before closure, the researcher tried to seek the students' opinion on what their thoughts are like and how they saw the programme of "thought stopping". She appreciated their responses and the interest they exhibited in the exercise. Before departure the researcher instructed them to practice at home all they had discussed in the previous exercise. The students departed.

#### **Week 5: Self Instruction Exercises.**

**Step 1:** The researcher welcomed the students for the next episode of the programme. She thanked them for their interest and commitment to the programme but advised late comers to always be punctual as part of good learning process. The researcher made general interaction with the students after the roll call.

**Step 2:** The researcher reviewed the previous lessons with the students and inquired from them if they encountered any difficulty during the week. The researcher guided them through. She then introduced a new topic called: "the use of self verbal mediators in form of self instruction" which can be adopted

to replace the negative thoughts about test or examination. The researcher enumerated the negative thoughts towards test and examination that were studied in week 3 and explained how they could be replaced with positive thoughts. She enumerated them with examples; as follows:-

‘I know everyone is doing better than me’- negative.

‘I do not think so I think I’m doing better than many people’- positive.

‘My parents and friends will be disappointed when I score very low in examination’- negative

‘None of their business, they won’t live my life for me’- positive.

The researcher explained that when they have positive thoughts or feelings towards test, the tendency is for them to see test as being pleasant and not to see test as distressful.

**Step 3:** The researcher gave the students paper to write out all those thoughts experienced within the week and replace them with positive thoughts based on the examples she has given. She inspected how they were doing it, instructing them to write in column 1, negative thoughts that they experienced when test is visualized and in column 2, the positive thoughts they used to replace each negative thought. The researcher picked paper and made her own columns using the negative thoughts listed in week 3. She then went through the student’s work for 10 minutes then went to the black board to display them in collaboration with the students.

**Question Time:** The researcher asked the students few questions, and then she told them to ask their own questions. She responded to their questions to their satisfaction.

**Closure:** The day's session came to an end with home assignment given to students on "replacing negative thoughts with positive thoughts ", advising them to always put visualized thoughts on paper and practice the process of putting positive thoughts against negative thoughts they replaced. The students departed.

#### **Week 6: Making sense out of the data recorded.**

**Step 1:** The researcher welcomed the students, praised them for being committed and dedicated to the programme. She then informed them that the day's exercise was going to be last episode of the programme. She made routine roll call, and invited them to submit their last assignment.

**Step 2:** The researcher and the clients reviewed previous works, done in week 5. She inquired from them the impact the exercise has had on their feelings, their ability to monitor themselves, build up self verbal positive mediators, and pass on self instruction on such negative thoughts towards test.

**Step 3:** The researcher now invited the clients (students) one after the other to replace negative thoughts with positive self talks. At the end, she encouraged them to be using positive self talks, anytime negative thoughts towards tests crops up their mind and they responded saying loudly, later softly and finally

silently. She then assured them that in the process of practicing self monitoring, thought stopping and building positive thoughts, especially in this era of continuous assessment, that they will observe how they will start developing interest in test and how they will be highly rated students, in test performance. She assured them how test anxiety will be reduced, and advised them on the importance of what they have done for the past six weeks.

**Question Time:** The researcher finally allowed the students to react to the entire exercise by asking questions on areas that were bordering them. She answered their questions to their satisfaction.

**Termination:** The researcher thanked the students for participating fully in the entire exercise and encouraged them to keep on practicing what they had been thought. The researcher informed them that they have come to the end of the therapy. She advised the students, to be sure that they set goals by themselves, emphasizing on the fact that self set goals are better motivators than those imposed by others. She advised them to ensure that one of their goals for instance, is to excel in the test challenges, that a challenging and attainable goal will hold one's interest and keep one motivated. She finally advised the students to frequently revise and update their goals, for every goal should have a target date. The programme was brought to an end.



**Treatment model 2 –Study Skills**

**Approach:** Study Skills Therapy.

**Theory:** Gestalt theory (Max Weithmer), Gestalt therapy (Fitz perl)

**Skills:** Summarization, Note taking, Study tips, Oral Interview, Questioning, Clarification, Paraphrasing, and Homework.

**Materials:** The researcher, students, books, sheets of paper, chalkboard e.tc.

**Mode:** Group counseling

**Recipients:** Junior secondary (JS2) with test anxiety in Awka south LGA.

**Duration:** 6 weeks at 40 minutes per session.

**Objectives:** This is to help the clients learn to acquire study skills so as to be fully prepared for test or examination. It is aimed at making the students get familiar with study tips that can aid them in their study. The aim being to reduce test anxiety, as available literature portray that students with test anxiety lack study skills. Thus the students learn how to pay attention to their problem behaviors and study habits that encourage the anxiety and how to overcome them.

**Structure:** There are numerous study skills but for this study the treatment covered awareness creation, teaching of study tips, and use of study quiz, summarization, note taking and use of memory cards.

## **Procedures-**

**Week 1 – Orientation:** The Guidance Counsellor of the school introduced the researcher to the students. The researcher received and welcomed the students to the counseling programme. She introduced herself as Mrs. Joy Sylvia. C. Obi from Nnamdi Azikiwe University, Awka, a resource person invited by the school Guidance Counselor, to have discussion with them on issues concerning test anxiety among secondary school students. She announced that the programme has six weeks duration and that students will benefit from it if they come regularly and punctually. She then told the students to make general introduction of themselves (the students introduced themselves). The researcher commenced by explaining the main topic which borders on how to use study skills in getting well prepared for test, thereby get rid of test anxiety. She explained test anxiety as a psychological condition that has many consequences on both the students and the school, socially and academically. Socially, she continued, test anxiety leads to hatred for one's study, lack of interest in school works, avoidance of test or evaluative situation, loosing of opportunities to get appointed as school prefects. Academically, she continued, it can cause permanent injury, poor academic performance and dropping out of school. The researcher announced to the students that through the inventory administered to them earlier, that results showed the existence of text anxiety in them and that it is necessary they learn how to help themselves get rid of the problem and have a better relaxed

attitude towards test or any evaluative situation. She explained the importance of finding the times and places when and where to do one's work as essential to being successful and reaching one's goals. She further said that being more alert in the morning or early evening will help one decide when to schedule study time. She said it is also necessary to have a quiet place set up for studying, which should be free from distractions and that every material needed for effective study session like dictionary, notebooks, calculator etc should be available at hand. She emphasized on the importance of communication and establishment of positive relationship with one's instructors, she quoted the adage which says:- "if at first you do not succeed, try, and try again" which translated that, "to succeed you need to exhaust all possibilities and paths to success until you reach your goal", explaining further that the best way to lose one's fear of the unknown is to familiarize oneself thoroughly with the test, so that it no longer remains an unknown. She further explained on the importance of making preparation months in advance in order to have plenty of time to make progress, and make brain perform at its best provided one takes good care of his body, and physically maintain a healthy life style, including healthy foods, because one's brain needs good nutrition, adequate sleep, short frequent breaks, while studying, regular exercise to keep one's body fit and healthy, reduction on dependence on caffeine or nicotine avoidance of alcohol or smoking during examination.

**Question Time:** The researcher welcomed questions from students which she answered to their satisfaction.

**Closure:** Before closing time the researcher assigned the students to write out their patterns when they go home. She thanked them for listening and contributing in the discussion and questioning.

**Week 2: listing and identification of study skills.**

**Step 1:** The researcher welcomed the students, inquired from them about their families and studies. She took roll call of the students and emphasized on the need for them to be punctual.

**Step 2:** The researcher and the students collaboratively reviewed works of the previous episode. Then she told the students to read out one after the other, their study patterns based on the assignment given to them. As they read, she took note of certain areas that need to be addressed and also praised them for good attempt and efforts, they have made.

**Step 3:** The patterns were explained to include, their private time table, the environment in which they study, their time schedule and many more. She pointed out that no two persons have the same habit and learning style. She enumerated the numerous study skills that are available for optimal learning, for instance summarization, study tips, memorization, Note taking etc. and that Study Skills offer more convenient ways for one to adequately prepare in advance and that the major way to lose one's fear of the unknown test is to

familiarize oneself thoroughly with one's studies by adopting the study skills, so that the subjects will no longer remain unknown to the person. She briefly explained Summarization and use of memory.

**Question time:** The students asked their usual questions, which the researcher answered to their satisfaction.

**Closure:** The researcher assigned the students to start practising summarization, when they get home, she instructed them to cut out a paper for summarizing what they were studying using their memory and to focus on the formulae for mathematics for instance. The session came to an end.

### **Week 3 – Study tips – Summarization**

**Step 1:** The researcher welcomed the students and expressed her satisfaction and happiness over their cooperation and performances.

**Step 2:** The researcher guided the students in review of the issues discussed in the last episode. The researcher called the students one by one to demonstrate the past study skills they have been using in their study. She praised them for the efforts they have made so far.

**Step 3:** The researcher started enumerating the numerous study tips, as listed below:

'It is best to review the material right after class when it is still fresh in your memory'.

‘Don’t try to do all the studying in the night before the test, instead space out the studying, review class materials at least several times a week, focusing on one topic at a time’.

‘Have all the study materials such as; lecture notes, course textbooks, study guides and other relevant materials in front of you’.

‘Find a comfortable and quiet place to study with good lighting and little distraction and try avoiding your bed for it is very tempting to just lie down and take a nap’.

‘Take notes and write down a summary of the important ideas as you read through the study material’.

‘Take short breaks frequently. The memory retains the information that is studied at the beginning and the end better than what is studied in the middle’.

‘Space out your studying; you will learn more by studying a little every day instead of waiting to cram at the last minute. By studying every day, the material will stay in your long term memory but if you try to study at the last moment, the material will only reside in your short term memory that you will easily forget’.

‘Make sure you understand the material well, don’t just read through the material and try to memorize everything. If you choose to study in a group, only study with others who are serious about the test’.

‘Test yourself or have someone test you on the material to find out where your weak and strong areas are. You can use the review questions at the end of each chapter or practice tests, the teacher may give out as well as other materials’.

‘Do not study later than the time you usually go to sleep, you may fall asleep or be tempted to go to sleep, instead try studying in the afternoon or early evening.

If you are morning persons try studying in the morning’.

She explained each of these and how they can be put into practice.

**Question Time:** Here the students are asked to ask questions, which the researcher answered to their satisfaction.

**Closure:** The researcher asked the students questions on the numerous study tips they were taught. On her closing remarks, she thanked them for their commitment and instructed them to practice what they discussed through the week.

#### **Week 4: Application of Summarization, Memory tips and Note taking Skills**

**Step1:** The researcher welcomed the students as usual, made the necessary personal interaction with them, made the roll call and praised them as good and committed students but stressed seriously on punctuality.

**Step 2:** The researcher and the students collaboratively reviewed the previous work. The researcher instructed the students to present some of the study tips that they were able to practice from what they were taught in the previous

episode. After listening to the students' presentations, the researcher praised them and congratulated them for job well done.

**Step3:** The researcher introduced the other types of study skills they are going to discuss for the day and said they could change their study skills, depending on the one that one noticed as more suitable to each individual and told them to optimize and practice it. She then explained summarization, note taking, and the use of memory in details. The exercise involved the use of 3x5 cards during study time in which students use to make summary after each study. The researcher brought out some 3x5 cards and explained using subjects like mathematics, integrated science and formulae as examples of issues to be put down using the memory on the cards. She distributed 3x5 papers to the students; and instructed them to put down some mathematics formulae that they can remember. She dictated some words and instructed them to write their meanings, such as give us examples of noun, pronoun, she also gave out some definitions and instructed them to write them on the memory card using their memory, for example, 'matter is anything that has weight and occupies space' etc. The researcher reminded the students that there were other ways to optimize their study skills, citing examples such as when they read the assigned text books, write notes about important points review their additional notes daily. She summarized the techniques to adopt as follows:-

'You can improve your study skills memory by using 3 x 5 cards to review important terms'.



‘Create study skills activities that you will use every week. For example have a weekly session where you write down important facts on a sheet of paper using your memory alone’.

‘Start your own study skills, lesson plan for each subject, your study skills lesson plan should include test taking ideas that you will use for each class’.

‘Do not allow test anxiety to creep into your emotions. Reduce your test anxiety by spending more time preparing for each test; spread your test preparation time’.

‘The main helpful study skills resource is your teacher, you should not be too discouraged to seek help when you need it’.

‘Write down notes on important facts so that you can review them the morning of your test. If they are involved in a mathematics or science subject, write out all of the important formulae on one sheet of paper and review them the morning of the next test’.

**Question time:** The students were given room to ask questions, which they did and the researcher answered them to their satisfaction.

**Closure:** The researcher thanked the students for their good behaviour, co-operation and commitment; advised them to keep practicing the use of the study skills she taught them. Before departure, she instructed them to bring their English textbooks for the next session.

**Week 5: Practice continues**

**Step 1:** The researcher once more welcomed the students, praised them for being good and committed students.

**Step 2:** She then asked the students questions on the subject matter; that is their ability to practice the use of summarization and other study tips she taught them. After their responses, the researcher instructed them to rehearse what they have done by reading a topic on their integrated science note that they were asked to bring, after which they have to summarize making use of the memory on the 3x5 paper given to them. The researcher went further to explain study skills as a way of life, and as one of the key to their success in school. Therefore she advised them that before going to class, they should prepare a list of questions where they have difficulty and during class they should consult their teacher. She advised them to be active in using creative study skills activities that tap into their own learning style and lastly they should maintain a positive attitude and do not let test anxiety overcome them. She further advised them to expect to have success on every test. She also warned of the dangers of one believing to fail which invariably leads to failure. She advised them to develop a new study skills list each day and follow it. Implementing all these study strategies will lead to a successful learning strategy and the best grade possible.

**Step 3:** At this juncture, the researcher instructed the students to list some of the study tips using their memory on the paper and believed they were able to apply the study tips in their daily pattern of study.

The researcher then asked the students to answer the following study skills quiz.

A. What can you do to avoid stress?

i. Skip class, ii. Sleep, iii set goals and plan ahead, iv. Do not take notes in class.

B. What is the best time to study?

i. During the day ii. At night, iii. After eating iv. Immediately after learning new method

C. What can you do if you don't like to sit and read for a long time?

i. Just don't read the books

ii. Try taking breaks or studying in groups

ii. Have a friend; read you the books out loud.

iv. Drink a lot of caffeine.

D. How can I pay attention in class when it seems so boring sometimes?

i. Connect the material to other information.

ii. Sit in the back and get some shut eye

iv. Jot in your note book.

E. How can I stop procrastinating?

i. Make schedule and follow it.

- ii. Watch all television shows until you are tired of watching television.
- iii. Just wait until the last minute because eventually you will stop.
- iv. Watch movies that have smart people in them.

The researcher picked one paper and wrote the answers and went to the black board to elaborate on it collaboratively with the students.

After quiz session the researcher had elaborate discussion with the students during which she explained to them, that the first and arguably the most important aspect of study skills acquisition is recognizing that one is responsible for his or her successes and also for his or her failures. Holding this responsibility she went further, entails the understanding that one's decisions, habits, resources, priorities, all determine the success he has or do not have with studying. However, she said a clear sense of who one is including, his beliefs and values,( instead of letting others dictate what one should say, do and believe) will also help the person to be more successful on the path he has chosen.

**Question Time:** The researcher gave the students opportunity to ask questions, which she answered to their satisfaction.

**Closure:** The researcher before departure instructed the students to come with their note books on integrated sciences for the coming week.

**Week 6:****Activities in week 3, 4 and week 5 are repeated.****Termination:**

The researcher made the following closing remarks as written below:-

You know that in your academic life, you must be able to separate who you are from what you do. So although you should put in your best effort, you cannot use your performance to determine who you are or will be in future. You always have more capability than might have been apparent in a particular test or examination and you can always try again. You have many strengths and talents. You are not your grades. From all we have discussed – be strong, positive and calm, plan time for relaxation it will boost your efficiency, use these study skills techniques to see yourself doing well in the examination. She then advised them never to give up on themselves and announced to them that, that the day is the final session. The researcher then thanked the students finally for their commitment, hard- work and cooperation. She said. She advised finally that they should continue practicing the study skills processes, which she believed will help them to fully prepare and be acquainted with their studies thereby equipping them for a better performance in their future.

### **Control Group (school C)**

Having administered an inventory on test anxiety and having identified those students with test anxiety, the researcher requested that the school Guidance counsellor in school C to apply a counselling process on the students in JS2 with test anxiety, which was done by the counsellor (Research Assistant).

### **Control of Extraneous Variables**

Nworgu (1991), referred to extraneous variables as independent variables which could exert some influences over the dependent variable but are not themselves being studied. Hence, the following extraneous variables could be identified in this study and was checked or controlled as follow:

### **Interaction among students in different treatment groups**

To minimize the interaction of the treatment groups, the two experimental groups were purposively selected in different location of the area of study and were assigned treatment models randomly.

### **Interaction between the actual treatment groups and the control group**

To avoid interaction between the students who are receiving treatment and those students in control group, different secondary schools at a distance were used which was selected purposively as earlier stipulated by the researcher.

### **Reducing test wiseness by the students**

This was checked by changing the colour of the papers for the pre-test, post-test and retention test and rearranging the numbers on the inventory, to avoid the students feeling they are being retested. Which if they knew may make them mechanical in their response. Furthermore, the researcher appeared as a resource person and gave the treatments, while the assistants administered the tests.

### **School Location**

To avoid the effect of using schools from different socio-economic and socio-geographical locations, students in secondary schools in the Anambra state capital (Awka South Local Government) were used for this study.

### **Pre-test Post-test Interaction**

To avoid this extraneous variable; which has to do with if the two tests are too close the tendency for the clients answers to be influenced by remembering the answer given in pre test and if too long the effect of forgetting what was learnt. The researcher took care of this, by ensuring that the gap between the two tests was on the average by using the period of six weeks. This helped to reduce the effect of history and also control the pre test sensitization.

### **Selection Biases**

The treatment groups and the control group were selected purposively. Each of the groups was not aware that another group existed. The researcher did not select all JS2 students with lower scores on anxiety for the experimental group, or all JS2 students with higher scores on test anxiety for the control group, thus the internal validity of between groups was not threatened. The criterion for any student to be a member of a group was the result of the TAI. Hence any difference between the pre test and the post test results is attributed to the treatment given to the experimental groups.

### **Stability of Instrument**

It has been established that the instrument used for this study was not faulty but was found appropriate. The researcher guided the school counsellors on how to administer the inventory. Correct usage and interpretation of the manual of the TAI was established.

### **Method of Data Analysis**

The Data collected for the study was analyzed. In answering the research questions mean was used. Then Analysis of Covariance (ANCOVA) was used in testing the hypotheses. Thus the data generated from the experiment was analyzed by answering the four research questions and testing the six hypotheses formulated for the study at 0.05 level of significance, using mean ratings and ANCOVA respectively.



## CHAPTER FOUR

### PRESENTATION AND ANALYSIS OF DATA

In this chapter, the data collected from the field for this study were analyzed and the summaries were presented in tables to highlight the findings. The presentation was sequentially starting with the answer to the research questions and then the testing of the null hypotheses.

#### Research Question 1

#### 1. What is the mean loss of the adolescents when exposed to Self Instruction?

**Table 2: Pretest and Posttest Mean ratings of Students who received SI and those in the Control Group**

Source of Variation	N	Pretest Mean	Posttest Mean	Loss Mean	Remark
Self Instruction Tech	35	47.89	24.14	23.75	positive Effect
Control Group	34	69.62	67.53	2.09	

Norms = 34.54

Data in Table 2 show that with pretest mean score of 47.89 and posttest mean score of 24.14 with loss mean 23.75 for the students treated with the self instruction technique as against pretest mean score of 69.62 and posttest mean score of 67.53 with loss mean of 2.09 for the students in the control group, Self Instruction technique has positive effect in reducing test anxiety among secondary school students. Also the posttest mean score 24.14 of students treated with Self Instruction is far below the norm of 34.54

## Research Question 2

### 1. What is the mean loss of the adolescents when exposed to Study Skills?

**Table 3: Pretest and Posttest Mean ratings of Students who Received SS and those in the Control Group**

Source of Variation	N	Pretest Mean	Posttest Mean	Loss Mean	Remark
Study skills Technique	38	46.13	31.34	14.79	positive Effect
Control Group	34	69.62	67.53	2.09	

Norms = 34.54

Data in Table 3 show that with pretest mean score of 46.13 and posttest mean score of 31.34 with loss mean 14.79 for the students treated with the study skills as against pretest mean score of 69.62 and posttest mean score of 67.53 with loss mean of 2.09 for the students in the control group, study skills technique has positive effects. Also the posttest mean score 31.34 of students treated with Study Skills technique is below the norm of 34.54.

## Research Question 3

What is the difference in the mean loss of students exposed to Self Instruction and the mean loss of students exposed to Study Skills in reducing test anxiety?

**Table 4: Pretest and Posttest Mean Scores of Students who Received SI and SS**

Source of Variation	N	Pretest Mean	Posttest Mean	Loss Mean	Remark
Self Instruction	35	47.89	24.14	23.75	positive Effect
Study skills	38	46.13	31.34	14.79	positive Effect
Difference in their loss mean				8.96	

Norms = 34.54

Table 4 indicates that with the loss mean of 23.75 and 14.79 for students who received SI and SS respectively with a difference of 8.96, SI is more effective than SS in reducing test anxiety.

#### Research Question 4

1. What is the difference in the post test and retention mean scores of students exposed to Self Instruction technique and the post test and retention mean scores of students exposed to Study Skills technique?

**Table 5: Posttest and Retention Mean ratings of Students who Received SI and SS**

Source of Variation	N	Posttest Mean	Retention Mean	Gained Mean	Remark
Self Instruction	35	24.14	28.26	4.12	durable
Study Skills.	38	31.34	28.42	-2.92	More durable

Norms = 34.54

Data in Table 5 reveal that with gained mean of -2.92 the durability of the reduction in test anxiety of the students who were treated with study skills technique is more than the durability of those students treated with self instruction technique who had gained mean of 4.12.

#### Null hypothesis 1

There is no significant difference in the mean scores of students exposed to Self Instruction and those in the control group.

**Table 6: ANCOVA on the Mean Scores of Students Treated with SI and those in the Control Group**

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	32511.29	2	16255.64	1494.40		
Intercept	757.74	1	757.74	69.66		
Pretest Scores	46.826	1	46.826	4.35		

Treatment Models	5343.95	1	5343.95	491.27	3.99	S
Error	717.93	66	10.87			
Residual	176213.00	69				
Corrected Total	33229.22	68				

In table 6, it was observed that at 0.05 level of significance, 1df numerator and 68df denominator, the calculated F 491.27 is greater than the critical F 3.99. Therefore, self instruction is significant in reducing students test anxiety.

#### Null hypothesis 2

There is no significant difference in the mean scores of students exposed to Study Skills and those in the control group.

**Table 7: ANCOVA on the Mean Scores of Students Treated with SS and those in the Control Group**

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	23536.72	2	11768.36			
Intercept	958.69	1	958.69			
Pretest Scores	38.09	1	38.09			
Treatment Models	3124.45	1	3124.45	183.80	3.99	S
Error	1172.94	66	17.00			
Residual	193587.00	69				
Corrected Total	24709.65	68				

In table 7, it was observed that at 0.05 level of significance, 1df numerator and 68df denominator, the calculated F183.80 is greater than the critical F 3.99. Therefore, study skills are significant in reducing students test anxiety.

### Null hypothesis 3

There is no significant difference in the posttest and retention mean scores of students exposed to Self Instruction on test anxiety.

**Table 8: ANCOVA on the Post test and Retention Mean Scores of Students treated with SIT.**

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	46.60	1	46.60			
Intercept	26.14	1	26.14			
Posttest Scores	46.60	1	46.60	3.83	4.13	NS
Error	402.08	33	12.18			
Residual	28395.00	35				
Corrected Total	448.69	34				

In table 8, it was observed that at 0.05 level of significance, 1df numerator and 34df denominator, the calculated F3.83 is less than the critical F4.13. Therefore, there is no significant difference in the posttest and retention mean scores of students exposed to Self Instruction Technique on test anxiety.

### Null hypothesis 4

There is no significant difference in the posttest and retention mean scores of students exposed to Study Skills on test anxiety.

**Table 9: ANCOVA on the posttest and retention mean scores of students treated with SS.**

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	70.87	1	70.87			
Intercept	162.94	1	162.94			
Posttest Scores	70.87	1	70.87	10.70	4.11	S
Error	238.40	36	6.62			
Residual	31004.00	38				
Corrected Total	309.26	37				

In table 9, it was observed that at 0.05 level of significance, 1df numerator and 37df denominator, the calculated F 10.70 is greater than the critical F 4.11. Therefore, there is significant difference in the posttest and retention mean scores of students exposed to Study Skills on test anxiety.

#### Null Hypothesis 5

There is no significant difference in the mean scores of students exposed to Self Instruction and those treated with Study Skills.

**Table 10: ANCOVA on the mean scores of students treated with SI and those treated with SS**

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	944.	2	472.16			
Intercept	971.28	1	971.28			
Pretest Scores	.053	1	.053			
Treatment Models	923.77	1	923.77	98.76	3.99	S
Error	654.79	70	9.35			
Residual	58384.00	73				
Corrected Total	1599.12	72				

Table 10 reveals that at 0.05 level of significance, 1df numerator and 72df denominator, the calculated F98.76 is greater than the critical F 3.99. Therefore, there is significant difference in the mean scores of students exposed to Self Instruction and those treated with Study Skills Techniques in reducing test anxiety.

#### Null Hypothesis 6

There is no significant difference in the retention mean scores of students exposed to Self Instruction and those treated with Study Skills.

**Table 11: ANCOVA on the retention mean scores of students treated with SI and those treated with SS**

Source of variation	SS	df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	109.55.	2	54.78			
Intercept	243.55	1	971.28			
Pretest Scores	109.06	1	109.06			
Treatment Models	57.4	1	57.42	6.19	3.99	S
Error	648.89	70	9.27			
Residual	58384.00	73				
Corrected Total	1599.12	72				

Table 11 shows that at 0.05 level of significance, 1df numerator and 72df denominator, the calculated F6.19 is greater than the critical F 3.99. Therefore, there is significant difference in the retention mean scores of students exposed to Self Instruction and those treated with Study Skills in reducing test anxiety.

### **Summary of the Findings**

From the analyses the following findings were made:

1. Self Instruction technique is very effective in reducing test anxiety among secondary school students.
2. Study Skills technique is effective in reducing test anxiety among secondary school students.
3. Self Instruction is more effective than Study Skills in reducing students' test anxiety.
4. Students who were treated with Study Skills technique retained more than those treated with self instruction in their reduced test anxiety.

5. Self instruction technique is significant in reducing students test anxiety.
6. Study Skills technique is significant in reducing students test anxiety.
7. There is no significant difference in the posttest and retention mean scores of students exposed to Self Instruction Technique on test anxiety.
8. There is significant difference in the posttest and retention mean scores of students exposed to Study Skills Technique.
9. There is significant difference in the posttest and retention mean scores of students exposed to Study Skills Technique on test anxiety.
10. There is significant difference in the mean scores of students exposed to Self Instruction and those treated with Study Skills Techniques in reducing test anxiety.
11. There is significant difference in the retention mean scores of students exposed to Self Instruction and those treated with Study Skills Techniques in reducing test anxiety.
12. The minor mean loss in the control group could be attributed to the counselling given to the students in the control group by their school Guidance counselor.



## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

In this chapter the following sub headings were presented and discussed.

Discussion of the results

Conclusion

Implications of the study

Limitations of the study

Suggestion for further research

Summary

#### **Discussion of the Results**

The discussion of the results is done along the following subtheme

Self Instruction on Test anxiety

Study Skills on Test anxiety

Retention of the effects of Self Instruction on Test anxiety

Retention of the effects of Study Skills on Test anxiety

Difference in the effectiveness of the two studied techniques on test anxiety

#### **Self Instruction on test anxiety of adolescent students**

The study revealed that Self Instruction is effective in reducing test anxiety of adolescent secondary school students as shown in table 2. Self Instruction Technique is effective in modifying test anxiety of secondary school adolescents because of its uniqueness of aiming at giving the clients control

over their behaviour through guided self talk that gradually becomes self generated. It comprises of numerous therapeutic elements within one therapy intervention whereby clients receive information that gear them to understand and monitor their behaviours or attributes that precipitates their distress before, during and after test or examination. Through Self Instruction the students with test anxiety were able to understand the consequences of their anxiety towards evaluation and what perpetuates the anxiety with the help of the researcher in a group counseling process.

The result is in line with Halderman and Baker (1992), who carried out a study on preparing a primary prevention program designed to help recipients to cope with irrational thoughts towards examination. The participants were treated with group instruction and self instruction condition. The result showed that self instruction can be applied in a group counseling setting.

Self Instruction is effective on test anxiety of secondary school students because of its involvement in replacing dysfunctional thoughts by self talk, which guides the client's to adaptive responses to test anxiety. It is an obligatory exercise programme. Where self monitoring, thought stopping, self verbal mediators come to play. The clients build up positive thoughts through statements commands to replace the negative thoughts that were monitored and stopped using self monitoring and thought stopping respectively this result is in line with Eisler (1993) who carried out a research on the verbal self guidance on the self efficiency and performance of selective interview. He found out that

clients who received training on verbal self guidance had higher self efficacy than the clients in the control group.

Self Instruction Technique is effective because it is carried out in a therapeutic session with the Counselor involved directly with the clients. This involves the counselor and the clients in group counseling process in a period, where the clients start by performing the task while the counselor instructs around. Then the client performed the tasks talking aloud, later whispering, and lastly performing the task with covert self instruction.

Self Instruction is effective because it is a cognitive behavioural treatment, involving self regulation of behaviour by means of language, recognizing the importance of cognitive processes, especially self belief and other internal self referential thought patterns in generation and maintenance of psychological problems and their remedy. The result is in line with Wachella and Katz (1999) who examined the effectiveness of cognitive behavioural treatment for reducing test anxiety and the result showed significant improvement in the treated group. According to Becks (1996), cognitive behaviour theory works by changing peoples' attitude and their behaviour focusing on thoughts and attitude of people and how it relates to their behaviour. These are still on effects of Self Instruction Technique. The result of the study is in line with Meichenbaun (1986) who emphasized cognitive behaviour change where clients are encouraged to change the scripted nature of their behaviour. However, through Self Instruction the students with test

anxiety realized the consequences and implication of their anxiety towards test and decided to reduce it. By learning to evaluate their behaviour towards test, using self monitoring, thought stopping, and building positive thoughts to replace the negative ones. Thus rather than avoid test or any evaluative process as result of anxiety, there is need according to Meichenbaum (1975) theory to successfully use Self Instruction to reduce students test anxiety, by aiding them to be aware of their self defeating and irrelevant thoughts, which according to Richard (1997) interferes with their preparation and effective test/examination taking, which Halderman and Baker (1992) earlier pointed out that it can lead to maladaptive responses to a variety of challenging situations in their lives. Thus it becomes apparent for these adolescents to be helped to identify their self defeating irrational ideas and learn how to cope and replace such thoughts.

### **Study Skills and Test Anxiety**

The results of this study reveal that Study Skills have effects on the test anxiety of secondary school adolescents as shown in table 3. Study skills technique is effective because it focused on equipping clients in effective study strategies. The result confirms Kirkland and Hollandworth (1981) who posited that intervention measures targeted at improving study skills are capable of reducing test anxiety. Furthermore, with Malayalam (2004) who presented, long range of perception to be adopted, by students having test anxiety with the bid to overcome it, emphasizing on adequate preparation before the test/examination. This is in line with the study carried out by Neimeyer and Feixas

(1990) on the role of homework and study skill acquisition in the outcome of group cognitive therapy for depression. And the findings indicated that study skill acquisition promoted and reinforced treatment.

Study Skills Technique has effects on test anxiety of secondary school adolescents because it is an obligation exercise that involves intervention measures targeted at improving the clients from the point of preparation of test, before, during and after the examination, emphasizing on adequate preparation. Zbornick (2001) pointed out that studies have shown that certain groups of students with test anxiety lack the necessary study skills. To which Okoye (2006) opined that inadequate preparation precipitates fear in examination. Thus in counseling clients are exposed to study skills by enumerating ways to optimize study skills and putting the clients to practice them, through home works, rehearsal, study skills testing and many more.

Thus, the result is in line with Bates (1980) on the effectiveness of intrapersonal skill training on the social skill acquisition and the results showed that social skills can be acquired through skill training. Also tallies with the study reported by Ozlem (2001) on study skill acquisition on income generation and the result showed that given skill training in an on the job setting, effective skills can be acquired. Study skills technique has effect on test anxiety of secondary school adolescents as it emphasizes effective examination taking strategies. Thus, Concurring with Onyechere (2002) summary on the principles to excel in a test without fear to entail mastery of test taking skills.

Hence, agrees with Kirkland and Hollandworth (1980) who referred to test anxiety as a reaction that occurs when individuals lack requisite test taking skills. Kirkland and Hollandworth (1980) in their study on the effective test taking skills acquisition verses anxiety reduction, where a skill acquisition treatment for test anxiety was compared with two anxiety reduction conditions, which results indicates that the test skill acquisition group was superior to the other condition in terms of performance.

Study Skills Technique has effect on test anxiety because of its emphasis on self confidence. Knowing that as humans, we are always afraid of the unknown, while familiarity brings contempt. Among the strategies used in study skills acquisition is the enhancement of self confidence to enter into test or examination without fear. Available literatures show that clients with test anxiety tend to perceive evaluation situations as personally threatening and apprehensively. But for Marshal (1994) adequate preparation for study builds confidence. Malayalam (2004) concurred when he emphasized on adequate application of the study skills for enhanced self confidence. Wright (1985) pointed out earlier the influence of study skills on increasing students' confidence in test. These are all on the effect of study skills on the test anxiety of secondary school students.

Thompson (1996) in his submission observes that among the overall functions of the guidance counselor is to help clients develop coping skills, as most clients' problems may be classified in such areas as lack of skills. Marshal

(1994) linked the study skills and test anxiety by likening the memory as a file where all one has learned are filed and the ones used often stay intact and are easily recalled with confidence without any anxiety. Thus it become apparent to help these students build up their study and examination taking skills, so that when they are aware that the information is in their memory, anxiety is reduced. Hence, concurring with Onyechere (2002) principles of excellence in examination without fear to involve mastery of study skills.

### **Retention of the effects of Self Instruction Technique**

The result of the durability of the treatment using Self Instruction Technique showed that the treatment was retained six weeks after treatment but not as much as in Study Skills, this is shown in table 5. One can say that this is in line with the natural way of human nature of practice makes perfect. The result confirms Kovel (1991) who pointed out that Self Instruction Technique as a cognitive behavioural therapeutic process aids brings about a real change that goes beyond feeling better, while the client is in therapy. While Becks (2008) pointed out that Self Instruction as a technique empowers people to grab firm of their own thought process and fix the mental mistakes they make that leads to problems. Thus, in line with Wachelka and Katz (1999) who after eight weeks of cognitive behavioural treatment using self instruction the participants demonstrated reduced test anxiety levels.

The difference in the mean scores of the post test and retention test showed that there is not much difference in the retention mean scores of the

students, which means that when self instruction is imbibed on a client it becomes part and parcel of the person thus the clients put what they have acquired into practice in their daily activities. This agrees with Lazarus (1991) who posited one of the procedures of self instruction to use with a client who is experiencing anticipatory anxiety to include being focus on what the client need to do among others. Richard (1997) stressed the steps in self instruction therapy to include memorizing the instructions and learning to say them at the required time. Thus Thompson (1996) confirmed that Self Instruction Technique directly influences clients to change what they say to themselves, by breaking chains of negative feelings and sensations such as fear, anger, anxiety and many more.

### **Durability of the Effects of Study Skills Technique**

The study showed that the adolescent students with test anxiety who were exposed to study skills retained the change that was effected on them. As shown in table 5 the minor difference in the post test and retention test showed that the study skills were highly retained by the clients. Thus in line with Paulman and Kennelly (2004) who posited that the proponents of Study Skills as having the assumption that intervention measures targeted at improving study and examinations taking skills are capable of reducing test anxiety. Also, Zbornick (2001) pointed out that studies have indicated that certain groups of students with test anxiety lack the necessary study skills to perform adequately on examination. Because, the clients have been exposed to the need for



frequent preparation of their study, their work now stay in front of their memory in the filing system, thus the anxiety over test is now at the minimal as the now see or participate in test or examination with self confidence.. Thus, Study Skills could be traced to the adage; practice makes perfect as the clients in the process of treatment were exposed to series of homework, assignment, practical exercises, the mastery tendency cannot be ruled out.

### **Difference in the relative effects of Self Instruction and Study Skills Techniques**

The difference in the effectiveness of Self Instruction and Study Skills is in line with the above findings as in table 4. The results of the present study indicate that the effect of the treatment was higher on the Self Instruction. Hence, tallies with Wachelka and Katz (1999) Baker (2003) Joomla (2009), in their different researches where they noted significant positive relationship between test anxiety and cognitive interference.

### **Conclusion of the Study**

From the findings of this study the following conclusions have been made: Self Instruction is highly effective in modifying test anxiety of secondary school adolescents.

- There is a significant difference between the post test mean score of the experimental group after treatment and the post test mean scores of the control group.

- There is no significant difference in the post test mean scores of students treated with Self Instruction and the mean scores of their retention test.
- Study skills are effective in modifying test anxiety of secondary school adolescents.
- There is a significant difference between post test mean scores of the experimental group after treatment with Study Skills and the post test mean scores of the control group.
- Study skills effect on test anxiety of secondary school adolescents could be retained after treatment.

Hence the results of this study have shown that test anxiety can be reduced with the two counseling techniques specifically used in this study. The data collected and analyzed however show that Self Instruction was more effective than Study Skills while Study Skills are more effective than ordinary counseling in reducing test anxiety among secondary school students. This confirms the position of Kirkland (1980) Burns (1990) Ekeruo (1991) Becks (1996) and many more.

### **Implications of the study**

The findings of this study have numerous implications arising, and having known that test anxiety of secondary school students is reduced or eliminated by Self Instruction and Study Skills Techniques. The major implication of this finding is that guidance counselors should use the

techniques in handling test anxiety. Another implication of this finding is that through Self Instruction interventions in their schools, self regulation of behaviour by means of language could be achieved, and thus the psychological climate of the schools can be improved for academic achievements.

The study revealed that study skills is effective in reducing test anxiety in secondary school students the implication of this finding is that counselors, teachers and psychologists who use study skills technique on reducing test anxiety should go on and use it. Which goes to show that the intervention of the techniques could aid adequate preparation for the students in their academics activities?

It is a known fact now that there is significant difference in the reduction of test anxiety in secondary school students who were exposed to the two techniques differently than those in the control group. The implication of this is that Self Instruction and Study Skills Techniques which uses self regulation and preparation, use of language and information in changing behaviour are more acceptable to students with test anxiety. The school counselors should use self instruction and study skills in the treatment of test anxiety so that students with test anxiety do not lose interest in academics thus dropout of school after JS3.

Counselors can identify students with test anxiety by administering test anxiety inventory used in this study. Similarly, the implication of this study is that when test anxiety is identified it could be modified within 6 weeks.

Similarly, the success rate achieved in treating test anxiety using these techniques implies that in this present study since the results here have shown that the problems can be solved within a reasonable period of time, teachers should ginger the students with similar problems to go for counseling.

### **Recommendations**

Based on the findings of this study and the implications of this study the following recommendations were made;

- 1) Every secondary school in the country should have a well equipped counseling unit to be manned by professional counselors. The aim is to enable these counselors effectively diagnose and treat students with test anxiety and other maladaptive behaviours in the school.
- 2) Proper and accurate diagnosis of the circumstances precipitating most examination malpractice among the students should be conducted to identify those whose inert problems are test anxiety who should be referred to the school Counselor.
- 4) Teachers should as much as possible pay close attention to their students' attitude in class before, during and after test or examination to identify those who exhibit symptoms of test anxiety and refer them for counseling.
- 5) Counselors in our Secondary Schools should use Self Instruction and Study Skills Techniques in order to reduce test anxiety.

- 6) School counselors should organize workshops and enlightenment seminar/workshop for teachers and school Administrators on test anxiety, its identification and reduction; this will help improve academic excellence.

### **Suggestions for Further Studies**

Based on the result of this study the following areas are suggested for further studies.

- This study can be replicated in the remaining 35 states in Nigeria
- Similar study could be carried out including such variables as, gender, age, school type high achievers, low achievers, class level and many more. A comparative study of Self Instruction and other counseling techniques in reducing test anxiety could be carried out.
- A comparative study of Study Skills and other counseling techniques on reducing test anxiety.
- This study could be replicated using other counseling therapies or combination of techniques from the available literature.
- Study skills could be used on the study habit of under achievers in order to help them to improve in their academic performances.
- Self Instruction could be used on bullying, aggressive, depressive behaviour of secondary school students and many more.

## **Summary of the Study**

This study looked at the effects of Self Instruction and Study Skills Techniques on reducing test anxiety of secondary school adolescents.

The main purpose of the study was to ascertain the effects of the two techniques on reducing test anxiety among adolescent student of JS 2 in Awka South Local Government Area of Anambra State. After outlining the significance of the study, four research questions and six hypotheses were formulated to guide the study. The study was delimited to students with test anxiety in secondary schools in Awka south Local Government Area which served as the population from which the sample was drawn using purposive sampling.

Series of theoretical studies were reviewed under cognitive behavioural theories; self monitoring such as Synder (1974), Meichanbaum (1980) theories on anxiety were reviewed among others. Various empirical studies were reviewed under test anxiety, self instruction and study skills techniques. A quasi experimental design was employed for the study. The quasi experimental design employed for the study was non randomized pretest – post test control group design. By means of purposive sampling two schools were chosen as the experimental groups while one school served as the control group, the sample was made up of 107 students with test anxiety.

The Spielbeger test anxiety inventory (TAI) which has already been validated for Nigerian use by Omoluabi (1993) was used as the pretest, post test

and retention test. The guidance Counselors and the career masters/ Mistresses in the 3 schools which were used for the study were trained as research assistants for the administration of pretest, post test, retention test instruction. The researcher gave the self instruction and study skills treatment to the experimental group for 6 weeks respectively.

After the treatment, the post test was administered to all the students with test anxiety in both experimental and the control groups. Durability test was given 3 months after completion of treatment. An analysis was done using mean ratings and ANCOVA in answering the research questions and testing the hypotheses respectively. After the analyses, the major findings made were Self Instruction Technique has positive effects in modifying test anxiety in adolescent students, Study Skills Technique also has positive effects and the control group had a minor mean loss that is not significant, which could be attributed to the counselling given to them by the research assistants.

The implications of the findings were given including that the self instruction is effective in modifying behaviour of Secondary school students with test anxiety instead of conventional counseling. It is now known that students test anxiety can be reduced with self instruction and study skills techniques. Recommendations were given based on the findings and implication of the study.

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## OPTION A

### TAI

NAME: \_\_\_\_\_ DATE \_\_\_\_\_ SEX M F

**DIRECTIONS:** A number of statements which people have used to describe themselves as given below. Read each Statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no rights or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel?

Almost never  
Sometimes  
Often  
Almost Always

1. I feel confident and relaxed while taking tests..... (1)(2)(3)(4)
2. While taking examinations I have an uneasy, upset feeling..... (1)(2)(3)(4)
3. Thinking about my grade in a course interferes with my work on tests..... (1)(2)(3)(4)
4. I freeze up on important exams..... (1)(2)(3)(4)
5. During exams I find myself thinking about whether I'll ever get through school..... (1)(2)(3)(4)
6. The harder I work at taking a test, the more confused I get..... (1)(2)(3)(4)
7. Thoughts of doing poorly interfere with my concentration on tests..... (1)(2)(3)(4)
8. I feel very jittering when taking an important test..... (1)(2)(3)(4)
9. Even when I'm well prepared for a test, I feel very nervous about it..... (1)(2)(3)(4)
10. I start feeling very uneasy just before getting a test paper back..... (1)(2)(3)(4)
11. During tests I feel very tense..... (1)(2)(3)(4)
12. I wish examinations did not bother me so much..... (1)(2)(3)(4)
13. During important tests I am so tense that my stomach gets upset..... (1)(2)(3)(4)
14. I seem to defeat myself while working on important tests..... (1)(2)(3)(4)
15. I feel very panicky when I take an important test..... (1)(2)(3)(4)
16. I worry a great deal before taking an important examination..... (1)(2)(3)(4)
17. During tests I find myself thinking about the consequences of failing..... (1)(2)(3)(4)
18. I feel my heart beating very fast during important tests..... (1)(2)(3)(4)
19. After an exam is over I try to stop worrying about it, but I just can't..... (1)(2)(3)(4)
20. During examinations I get so nervous that I forget facts I really know..... (1)(2)(3)(4)

## OPTION B

### TAI

NAME: \_\_\_\_\_ DATE \_\_\_\_\_ SEX M F

**DIRECTIONS:** A number of statements which people have used to describe themselves as given below. Read each Statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no rights or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel?

Almost never  
Sometimes  
Often  
Almost Always

1. After an exam is over I try to stop worrying about it, but I just can't..... (1)(2)(3)(4)
2. During examinations I get so nervous that I forget facts I really know ..... (1)(2)(3)(4)
3. During tests I find myself thinking about the consequences of failing ..... (1)(2)(3)(4)
4. I feel my heart beating very fast during important tests ..... (1)(2)(3)(4)
5. I feel very panicky when I take an important test..... (1)(2)(3)(4)
6. I worry a great deal before taking an important examination ..... (1)(2)(3)(4)
7. During important tests I am so tense that my stomach gets upset..... (1)(2)(3)(4)
8. I seem to defeat myself while working on important tests .....(1)(2)(3)(4)
9. Even when I'm well prepared for a test, I feel very nervous about it.....(1)(2)(3)(4)
10. I feel very jittering when taking an important test .....(1)(2)(3)(4)
11. I wish examinations did not bother me so much .....(1)(2)(3)(4)
12. I start feeling very uneasy just before getting a test paper back.....(1)(2)(3)(4)
13. During tests I feel very tense .....(1)(2)(3)(4)
14. Thoughts of doing poorly interfere with my concentration on tests ..... (1)(2)(3)(4)
15. The harder I work at taking a test, the more confused I get ..... (1)(2)(3)(4)
16. During exams I find myself thinking about whether I'll ever get through school ..... (1)(2)(3)(4)
17. I freeze up on important exams .....(1)(2)(3)(4)
18. Thinking about my grade in a course interferes with my work on tests..... (1)(2)(3)(4)
19. While taking examinations I have an uneasy, upset feeling ..... (1)(2)(3)(4)
20. I feel confident and relaxed while taking tests ..... (1)(2)(3)(4)



## OPTION C

### TAI

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_ SEX M F

**DIRECTIONS:** A number of statements which people have used to describe themselves are given below. Read each Statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no rights or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel?

Almost never  
Sometimes  
Often  
Almost Always

1. The harder I work at taking a test, the more confused I get..... (1)(2)(3)(4)
2. During exams I find myself thinking about whether I'll ever get through school..... (1)(2)(3)(4)
3. During tests I feel very tense ..... (1)(2)(3)(4)
4. Thoughts of doing poorly interfere with my concentration on tests ..... (1)(2)(3)(4)
5. While taking examinations I have an uneasy, upset feeling ..... (1)(2)(3)(4)
6. I feel my heart beating very fast during important tests ..... (1)(2)(3)(4)
7. I freeze up on important exams ..... (1)(2)(3)(4)
8. I seem to defeat myself while working on important tests ..... (1)(2)(3)(4)
9. Even when I'm well prepared for a test, I feel very nervous about it..... (1)(2)(3)(4)
10. I feel very jittering when taking an important test ..... (1)(2)(3)(4)
11. After an exam is over I try to stop worrying about it, but I just can't ..... (1)(2)(3)(4)
12. Thinking about my grade in a course interferes with my work on tests ..... (1)(2)(3)(4)
13. I feel very panicky when I take an important test ..... (1)(2)(3)(4)
14. During tests I find myself thinking about the consequences of failing ..... (1)(2)(3)(4)
15. During examinations I get so nervous that I forget facts I really know ..... (1)(2)(3)(4)
16. I feel confident and relaxed while taking tests ..... (1)(2)(3)(4)
17. I worry a great deal before taking an important examination ..... (1)(2)(3)(4)
18. I start feeling very uneasy just before getting a test paper back ..... (1)(2)(3)(4)
19. During important tests I am so tense that my stomach gets upset ..... (1)(2)(3)(4)
20. I wish examinations did not bother me so much ..... (1)(2)(3)(4)

## Appendix d

### Report

TREATMENT MODEL		PRETEST SCORES	POSTTEST SCORES	RETENTION SCORES
1.00	Mean	47.8857	24.1429	28.2571
	N	35	35	35
	Std. Deviation	6.47062	1.75135	3.63272
2.00	Mean	46.1316	31.3421	28.4211
	N	38	38	38
	Std. Deviation	6.09018	3.85743	2.89110
3.00	Mean	69.6176	67.5294	66.0588
	N	34	34	34
	Std. Deviation	4.00768	4.47373	4.33409
Total	Mean	54.1682	40.4860	40.3271
	N	107	107	107
	Std. Deviation	12.00510	19.10910	18.00827

### Analysis of Covariance

#### Between-Subjects Factors

		N
TREATMENT MODEL	1.00	35
	2.00	38
	3.00	34

#### Tests of Between-Subjects Effects

Dependent Variable: RETENTION SCORES

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	33417.636 <sup>a</sup>	3	11139.212	1197.746	.000
Intercept	244.497	1	244.497	26.290	.000
POSTTEST SCORES	419.916	1	419.916	45.152	.000
TREATMENT MODEL	961.355	2	480.678	51.685	.000
Error	957.915	103	9.300		
Total	208387.000	107			
Corrected Total	34375.551	106			

a. R Squared = .972 (Adjusted R Squared = .971)

## CONTROL GROUP DATA FREQUENCIES

### Statistics

		PRETEST SCORES	POSTTEST SCORES	RETENTION SCORES
N	Valid	34	34	34
	Missing	0	0	0

### Frequency Table

#### PRETEST SCORES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	61.00	1	2.9	2.9	2.9
	62.00	1	2.9	2.9	5.9
	63.00	1	2.9	2.9	8.8
	64.00	2	5.9	5.9	14.7
	65.00	1	2.9	2.9	17.6
	66.00	2	5.9	5.9	23.5
	67.00	1	2.9	2.9z	26.5
	68.00	2	5.9	5.9	32.4
	69.00	3	8.8	8.8	41.2
	70.00	6	17.6	17.6	58.8
	71.00	3	8.8	8.8	67.6
	72.00	3	8.8	8.8	76.5
	73.00	1	2.9	2.9	79.4
	74.00	2	5.9	5.9	85.3
	75.00	4	11.8	11.8	97.1
	76.00	1	2.9	2.9	100.0
	Total	34	100.0	100.0	

#### POSTTEST SCORES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60.00	2	5.9	5.9	5.9
	61.00	2	5.9	5.9	11.8
	62.00	2	5.9	5.9	17.6

63.00	3	8.8	8.8	26.5
64.00	2	5.9	5.9	32.4
65.00	1	2.9	2.9	35.3
66.00	1	2.9	2.9	38.2
67.00	3	8.8	8.8	47.1
68.00	2	5.9	5.9	52.9
69.00	3	8.8	8.8	61.8
70.00	1	2.9	2.9	64.7
71.00	4	11.8	11.8	76.5
72.00	2	5.9	5.9	82.4
73.00	4	11.8	11.8	94.1
74.00	2	5.9	5.9	100.0
Total	34	100.0	100.0	

POST TEST SCORES

	Frequency	Percent	Valid Percent	Cumulative Per
Valid 21.00	1	2.6	2.6	2.6
25.00	2	5.3	5.3	7.9
26.00	1	2.6	2.6	10.5
27.00	2	5.3	5.3	15.8
28.00	2	5.3	5.3	21.1
29.00	5	13.2	13.2	34.2
30.00	2	5.3	5.3	39.5
31.00	3	7.9	7.9	47.4
32.00	3	7.9	7.9	55.3
33.00	6	15.8	15.8	71.1
34.00	3	7.9	7.9	78.9
35.00	3	7.9	7.9	86.8
36.00	2	5.3	5.3	92.1
37.00	1	2.6	2.6	94.7
38.00	2	5.3	5.3	100.0
Total	38	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	56.00	1	2.9	2.9	2.9
	58.00	1	2.9	2.9	5.9
	59.00	1	2.9	2.9	8.8
	61.00	3	8.8	8.8	17.6
	62.00	1	2.9	2.9	20.6
	63.00	1	2.9	2.9	23.5
	64.00	3	8.8	8.8	32.4
	65.00	5	14.7	14.7	47.1
	66.00	1	2.9	2.9	50.0
	67.00	2	5.9	5.9	55.9
	68.00	4	11.8	11.8	67.6
	69.00	5	14.7	14.7	82.4
	70.00	3	8.8	8.8	91.2
	73.00	2	5.9	5.9	97.1
	75.00	1	2.9	2.9	100.0
	Total	34	100.0	100.0	

## EXPERIMENTAL GROUP 2 DATA

### Statistics

		PRETEST SCORES	POSTTEST SCORES	RETENTION SCORES
N	Valid	38	38	38
	Missing	0	0	0

## Frequency Table

### PRETEST SCORES

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	34.00	1	2.6	2.6	2.6
	35.00	1	2.6	2.6	5.3
	38.00	1	2.6	2.6	7.9
	39.00	2	5.3	5.3	13.2
	40.00	5	13.2	13.2	26.3
	43.00	3	7.9	7.9	34.2
	44.00	2	5.3	5.3	39.5
	45.00	1	2.6	2.6	42.1
	46.00	5	13.2	13.2	55.3
	47.00	2	5.3	5.3	60.5
	48.00	3	7.9	7.9	68.4
	49.00	1	2.6	2.6	71.1
	50.00	1	2.6	2.6	73.7
	51.00	4	10.5	10.5	84.2
	54.00	1	2.6	2.6	86.8
	55.00	2	5.3	5.3	92.1
	56.00	1	2.6	2.6	94.7
	57.00	1	2.6	2.6	97.4
	58.00	1	2.6	2.6	100.0
Total		38	100.0	100.0	

### POST TEST SCORES

		Frequency	Percent	Valid Percent	Cumulative Percent
va	21.00	1	2.6	2.6	2.6
	25.00	2	5.3	5.3	7.9
	26.00	1	2.6	2.6	10.5
	27.00	2	5.3	5.3	15.8
	28.00	2	5.3	5.3	21.1
	29.00	5	13.2	13.2	34.2

30.00	2	5.3	5.3	39.5
31.00	3	7.9	7.9	47.4
32.00	3	7.9	7.9	55.3
33.00	6	15.8	15.8	71.1
34.00	3	7.9	7.9	78.9
35.00	3	7.9	7.9	86.8
36.00	2	5.3	5.3	92.1
37.00	1	2.6	2.6	94.7
38.00	2	5.3	5.3	100.0
Total	38	100.0	100.0	

**RETENTION SCORES**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	23.00	2	5.3	5.3	5.3
	25.00	3	7.9	7.9	13.2
	26.00	5	13.2	13.2	26.3
	27.00	5	13.2	13.2	39.5
	28.00	9	23.7	23.7	63.2
	29.00	2	5.3	5.3	68.4
	30.00	2	5.3	5.3	73.7
	31.00	3	7.9	7.9	81.6
	32.00	1	2.6	2.6	84.2
	33.00	5	13.2	13.2	97.4
	34.00	1	2.6	2.6	100.0
Total		38	100.0	100.0	



## Analysis of Covariance

### Between-Subjects Factors

		N
TREATMENT MODEL	1.00	35
	2.00	38

### Tests of Between-Subjects Effects

Dependent Variable: POSTTEST SCORES

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	944.338 <sup>a</sup>	2	472.169	50.477	.000
Intercept	971.284	1	971.284	103.835	.000
PRETEST SCORES	.053	1	.053	.006	.940
TREATMENT MODEL	923.766	1	923.766	98.755	.000
Error	654.786	70	9.354		
Total	58384.000	73			
Corrected Total	1599.123	72			

a. R Squared = .591 (Adjusted R Squared = .579)

## Analysis of Covariance

### Between-Subjects Factors

		N
TREATMENT MODEL	1.00	35
	2.00	38

### Tests of Between-Subjects Effects

Dependent Variable: RETENTION SCORES

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	109.551 <sup>a</sup>	2	54.775	5.909	.004
Intercept	243.549	1	243.549	26.273	.000
POSTTEST SCORES	109.061	1	109.061	11.765	.001
TREATMENT MODEL	57.416	1	57.416	6.194	.015
Error	648.888	70	9.270		
Total	59399.000	73			
Corrected Total	758.438	72			

a. R Squared = .144 (Adjusted R Squared = .120)

## Frequencies

## EXPERIMENTAL GROUP 1 DATA

## Statistics

		PRETEST SCORES	POSTTEST SCORES	RETENTION SCORES
N	Valid	35	35	35
	Missing	0	0	0

## Frequency Table

## PRETEST SCORES

		Frequency	Percent	Valid Percent	Cumulati ve Percent
Valid	33.00	1	2.9	2.9	2.9
	37.00	1	2.9	2.9	5.7
	39.00	1	2.9	2.9	8.6
	40.00	1	2.9	2.9	11.4
	41.00	1	2.9	2.9	14.3
	42.00	1	2.9	2.9	17.1
	43.00	4	11.4	11.4	28.6
	44.00	2	5.7	5.7	34.3
	46.00	5	14.3	14.3	48.6
	47.00	2	5.7	5.7	54.3
	48.00	1	2.9	2.9	57.1
	49.00	1	2.9	2.9	60.0
	50.00	1	2.9	2.9	62.9
	51.00	2	5.7	5.7	68.6
	53.00	2	5.7	5.7	74.3
	54.00	1	2.9	2.9	77.1
	55.00	4	11.4	11.4	88.6
	56.00	1	2.9	2.9	91.4
	57.00	1	2.9	2.9	94.3
	58.00	1	2.9	2.9	97.1
	60.00	1	2.9	2.9	100.0
	Total	35	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20.00	1	2.9	2.9	2.9
	21.00	2	5.7	5.7	8.6
	22.00	3	8.6	8.6	17.1
	23.00	4	11.4	11.4	28.6
	24.00	11	31.4	31.4	60.0
	25.00	7	20.0	20.0	80.0
	26.00	3	8.6	8.6	88.6
	27.00	4	11.4	11.4	100.0
	Total	35	100.0	100.0	

**RETENTION SCORES**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21.00	1	2.9	2.9	2.9
	22.00	1	2.9	2.9	5.7
	23.00	1	2.9	2.9	8.6
	24.00	1	2.9	2.9	11.4
	25.00	3	8.6	8.6	20.0
	26.00	4	11.4	11.4	31.4
	27.00	4	11.4	11.4	42.9
	28.00	5	14.3	14.3	57.1
	29.00	3	8.6	8.6	65.7
	30.00	6	17.1	17.1	82.9
	32.00	1	2.9	2.9	85.7
	33.00	2	5.7	5.7	91.4
	34.00	1	2.9	2.9	94.3
	35.00	1	2.9	2.9	97.1
	38.00	1	2.9	2.9	100.0