



The Journal of Social Sciences Research

ISSN(e): 2411-9458, ISSN(p): 2413-6670

Vol. 2, No. 9, pp: 159-166, 2016

URL: <http://arpgweb.com/?ic=journal&journal=7&info=aims>

Effects of Self-Management Technique on Test Anxiety among Secondary School Students

Ada Anyamene

Department of Guidance and Counselling, Nnamdi Azikiwe University, Awka, Nigeria

Chinyelu Nwokolo*

Department of Guidance and Counselling, Nnamdi Azikiwe University, Awka, Nigeria

Ifeanyi Azuji

Department of Guidance and Counselling, Nnamdi Azikiwe University, Awka, Nigeria

Abstract: Test anxiety is an observable fact that many students usually encounter during tests. It is considered to be one of the most common and widespread emotions, with a large number of the student population suffering from its excessive and overbearing level. This study investigated the Effect of Self-management Technique in reducing Test Anxiety among secondary school students. Two research questions were posed and two hypotheses formulated to guide the study. The study is a quasi-experimental research and employed a 2x2 factorial design pretest-posttest experimental control group, comprising two groups (Experimental group and control) using one treatment group (Self-management Technique {SMT}. The population comprised all the secondary school students in Onitsha urban areas with test anxiety. A total of 77 students were selected from two schools using a standardised instrument titled "Test Anxiety Inventory". The instrument, Test Anxiety Inventory was administered to both the experimental group and the control group before and after treatments, making up the pre test and post test. The data relating to the research questions were analysed using mean scores. The data relating to the null hypotheses were analysed using the Analysis of Co-variance (ANCOVA). The result of the study showed that self-management technique was effective and significant in reducing test anxiety. Based on the findings of the study, the implications of the findings were highlighted, recommendations and suggestions for further studies made. The researcher recommended, among others that Self-management technique should be utilised by guidance counsellors in reducing test anxiety among secondary school students in the State and the nation in general.

Keywords: Effect; Self-management technique; Test anxiety; Secondary school students.

1. Introduction

1.1. Test Anxiety

In Nigeria, especially in Anambra State, most students experience anxiety during tests. According to Nwankwo *et al.* (2014), most students at the verge of entering for school tests are seen to exhibit some forms of anxiety, restlessness, trembling, fidgeting or panicking. This should not be the case, because tests are normal situations which one should not be afraid to participate in. Egbochukwu *et al.* (2008) observed that many secondary school students usually feel uneasy, fearful and anxious as tests approaches; some even go to the extent of feigning sickness. This anxious state of emotion exhibited by students towards test-taking is what Spielberger (2005) has referred to as test anxiety, and it constitutes a serious academic impediment to students.

Ergene (2003) has defined the term 'test anxiety' as a scientific construct, referring to the set of phenomenological, physiological, and behavioural responses that accompany concern about possible negative consequences or failure at an examination or at a similar evaluative situation. Test anxiety has been considered to include physiological over-arousal, often referred to as "emotionality," along with dread, worry, and expectations of terrible failure (Ergene, 2003). Hence, Bufka *et al.* (2009) see anxiety as an emotional state in which people feel uneasy, apprehensive, or fearful. Spielberger (2005) explained test anxiety as an unpleasant state characterised by feelings of tension and apprehension, worrisome thoughts and activation of autonomic nervous system, when an individual faces an evaluative achievement-demanding situation. Test anxiety for the purpose of this study is defined as a psychological condition in which students experience intense fear, worry and concern during tests.

When secondary school students develop extreme fear for performing poorly on tests, they usually experience test anxiety. Secondary school student according to merriam-webster.com is a child in an intermediate school between primary school and university and usually offered general, technical, vocational, or university-preparatory subjects. For these students, test anxiety is a major factor contributing to a variety of negative outcomes, including

psychological distress, academic underachievement, academic failure, and insecurity (Olorufemi-Olabisi and Akomolafe, 2013). According to Zeidner (2004), many students may have the cognitive ability to do well in tests, but may not do so because of high levels of test anxiety. As a result of the societal emphasis placed on testing, this could potentially limit their educational and vocational opportunities (Zeidner, 2004).

Anxiety influences test performance in substantial ways, some students would perform worse than their ability would otherwise allow. Students at all levels who suffer from test anxiety most often choose and pursue careers which may not fully challenge their cognitive abilities (Ergene, 2003). There is no doubt that these students need as much help as possible.

Test anxiety is a significant issue for counselling as can be evidenced by its volume of growing literature. In explaining the need to study test anxiety the researchers, argued that we live in a test-conscious, test-giving culture in which the lives of people are in part determined by their test performance. Test anxiety is frequently cited among other important factors at play in determining a wide array of unfavourable outcomes for students; these factors include poor cognitive performance, scholastic underachievement, psychological distress, and ill health (Zeidner, 2004). Test anxiety has been found to interfere with competence, both in laboratory settings as well as in true-life testing situations in secondary school or university settings (Zeidner, 2004). Hembree (1998) study, based on 562 North American studies, has shown that test anxiety correlated negatively with a lot of socially accepted measures of school achievement and ability at both secondary school and university levels. People usually experience anxiety about events they cannot control or predict, or about events that seem threatening or dangerous; as a result of these, test anxious students tend to react with a strong view of threat, reduced feelings of being able to produce desired result, having a low opinion of self; expecting to fail, blaming others, and having a strong emotional reactions and arousal at every first sign of failure.

Anxiety over test situation is an emotional problem for many students, which if not attended to, could result in neurotic difficulties (Adeola and Adedipe, 2003). Anxiety, in most cases, results to frustration, and this is capable of affecting the totality of the individual as well as his/her personality (Omoluabi, 2003). To some people, the symptoms of anxiety can become so excessive that they make it difficult or even impossible for people to focus on a test. Symptoms such as nausea, sweating and nervousness are actually experienced as a result of such emotional problems.

Reducing test anxiety has been one of the important concerns in most test anxiety researches. The problem of test anxiety has been conceptualised in many ways by different researchers. This has led to different ways of approaching its treatment. In the previous time, test anxiety was understood as physiological or emotional phenomena. Treatment efforts as of the time were directed towards reducing the physiological arousal through behavioural methods. Later, treatments shifted more in the direction of cognitive and combined approaches (Akca, 2011). Various treatments have been developed or applied to test anxiety, They include: behavioural approaches incorporating systematic desensitization, relaxation training, biofeedback, modelling, anxiety reduction technique, anxiety management training and other behavioural techniques (Kondo and Gifu, 1997); cognitive approaches with rational emotive therapy, cognitive restructuring and other cognitive techniques, as well as cognitive-behavioural approaches including cognitive-behavioural modification, stress-inoculation training and other cognitive behavioural techniques (Duffy, 2011) and skill-deficit treatment approaches involving study skills training, test-taking skills training, other skill deficit approaches and cognitive behavioural and skill-focused treatment approaches combined (Ergene, 2003).

Test anxiety reduction programmes is continually gaining widespread acceptance, and are used as treatment for students and persons in different stages of learning (Gregor, 2005). Literature exists that describes the process and outcome of test anxiety reduction programmes with students at different level (Egbochukwu and Obadan, 2005; Ergene, 2003; Lawani, 2011; Segool, 2009) Some of these information has been presented as descriptive or anecdotal reports. Some of the treatments have been shown to be effective in modifying test anxiety levels of clients. However, most of the interventions are western-based. The generalisability of the research according to Ergene (2003) has often been hampered by small samples, different research settings and conditions, as well as by conflicting results.

A number of studies such as Stober and Pekrun (2004), Sawyer and Hollis-Sawyer (2005), Standen (2005) and Gregor (2005), have also investigated the efficacy of interventions in reducing test anxiety among secondary school students. Though there have been positive results with most of the cognitive behavioural interventions, and relaxation skills; test anxiety issue among secondary school students still remains a distressing condition which ought to be rectified.

The problem of test anxiety which often lead to poor academic performance has become worrisome and unsatisfactory to students, counsellors, teachers, school administrators, parents and the larger society. The various efforts put forward in addressing the problem of test anxiety among students has been widely acknowledged, yet without satisfaction so far. Although, there are a number of research works on test anxiety in Nigeria, for instance, Osiki and Busari (2006) have used self-statements monitoring techniques in reducing test anxiety among adolescent underachievers while Egbochukwu *et al.* (2008) have successfully employed systematic desensitization therapy in the reduction of test anxiety among adolescents in Nigeria. Most studies on self-management are western-based, and findings from such studies indicated that self-management technique is effective in handling behavioural problems of students in school. The researchers however are of the opinion that, since Self-management technique is said to be

effective in reducing test anxiety among adolescents in those areas, it becomes important to replicate a study of this kind locally in Onitsha urban areas, Anambra State, Nigeria to ascertain the effectiveness of this technique.

2. Self-Management Technique

Self-management technique is a technique that has emerged as an effective approach for improving classroom behaviour (Barry and Messer, 2003). Self-management strategies can be separated into measures based on the principles of contingency management or cognitive control strategies (Mitchem and Young, 2001). Treatments based on the principles of contingency management highlight the correlation between behavioural responses and their consequences. Strategies, such as self-monitoring, self-reward and self-recording are examples of contingency-based self-management procedures (Stober and Pekrun, 2004).

In the other hand, cognitive-based self-management strategies emphasises the origin of the response. The cognitive-based self-management makes it necessary that test anxious students should examine the thought process that comes before a response. The rationale for these treatments is the belief that behavioural self-control can be increased by enhancing specific, cognitive, or meta-cognitive skills that are believed to underlie and promote impulse control (Waschbush and Hill, 2001). The modification of the thought process is the goal of this treatment. Self-management techniques for the purpose of this study are an individual's personal application of behavioural change tactics in order to produce the desired change in behaviour.

In addition, there is a need to put social, cultural, gender and economic factors into consideration in this test anxiety treatment programme. Sex has been found to affect test anxiety significantly (Makinde, 2000). Since this study looked at effect of the aforementioned technique in co-educational schools, it is important that the issue of sex is considered alongside so as to ascertain if treatment effect observed is as a result of gender interference.

Although a good number of researchers such as (Berger, 2005; Braver, 2008; Lawani, 2011) have investigated the effects of different psychological techniques in reducing test anxiety, the problem still remain a source of worry and concern to many students, parents, counsellors, teachers, and others in the society. As at the time of this study, the researchers were not aware of any study that seek to determine the effects of Self-management technique in reducing test anxiety among secondary school students that had been conducted in Onitsha urban areas, Anambra State. This therefore has necessitated this study.

3. Purpose of the Study

The main purpose of this study is to determine the Effects of Self-management technique in reducing test anxiety among secondary school students. Specifically, the study intends to determine;

1. The effects of Self-management technique in reducing test anxiety among secondary school students.
2. Whether there is any difference in the effect of the treatment technique in reducing test anxiety among secondary school male and female students.

4. Scope of the Study

This research was delimited to students with high level of text anxiety in coeducational secondary schools in Onitsha urban areas. Specifically, the study focuses on the effects of Self-management technique in reducing test anxiety among senior secondary school students (SS 1 & SS 2) in coeducational schools in Onitsha urban areas.

5. Research Questions

The following question served as a guide for the study:

1. How effective is Self-management technique in reducing test anxiety among secondary school students?
2. What is the difference in the effect of the treatment technique in reducing test anxiety among secondary school male and female students?

6. Hypothesis

The following null hypothesis guided the study, and was tested at the 0.05 level of significance:

1. There is no significant difference in the effects of Self-management technique in reducing test anxiety among male and female secondary school students.
2. There is no significant difference in the mean post-test scores of students who received treatment of self-management technique and those in the control group.

7. Method

7.1. Research Design

This study is a quasi-experimental research. The study adopted a 2x1 factorial research design comprising 2 experimental groups and 1 treatment technique making 6 cells. Harrington and Harrington (2006) described a quasi-experimental study as a type of experimental study that determines the effect of a treatment paradigm on a non-randomised sample. Ali (1999) argued that a quasi-experimental research design could be used in a school setting where it is not always possible to use pure experimental design which was considered as disruption of school activities. Many quasi experimental methods are available but the one that was used for this study was a non-randomised pretest -posttest and control group design.

Table-1. A Non randomised pre-test and post-test control group design

Group	Pre-test	Research condition	Post-test
Experimental (1)	O1	X1 (treatment)	O2
Control (2)	O1	-X(Neutral interaction)	O2

Here, O1- stands for the pre-test that was given to all the students

X1 - Stands for treatment 1 (systematic desensitisation technique) which will be given to the experimental group 1.

-X – stands for the Neutral interaction the researcher will have with the control group

O2– stands for the Post-test which was given to both experimental and control group.

7.2. Area of the Study

The study was conducted in Onitsha urban areas of Anambra State. Onitsha is a city, with a river port on the Eastern bank of the Niger River in Anambra State, South Eastern Nigeria. Onitsha urban is divided into two Local Government areas; Onitsha North and Onitsha South. Onitsha urban is surrounded by neighbouring towns like Ogbaru, Idemili North(Nkpor, Ogidi,Obosi, Umuoji), Idemili South (Oba), Oyi (Ogbunike, Umunya, and Nkwelle – Ezunaka) and Anambra East (Nsugbe).

Onitsha, according to [UN-HABITAT \(2009\)](#) is said to be the most populous and rapidly expanding commercial and educational centre in Anambra State. Also, in the words of Okpala in [UN-HABITAT \(2009\)](#), Onitsha is an admirable and sought-after city', being one of the largest cities in Nigeria, and a major 'centre of education' with many famous secondary schools and has developed its own 'intellectual climate', that 'manifested in numerous booklets (and pamphlets)'. Despite all these, the researcher has observed that examination misconduct and dropout rate have been high in Onitsha, with many "miracle" centres set up to assist candidates in cheating during examinations. It is possible that test anxiety may have played a role.

7.3. Population of the Study

The population of this study is 1983 students. These comprised of all the senior secondary schools students (SS 1 & SS 2) from all the coeducational secondary schools in Onitsha urban areas with high level of test anxiety. The student population was identified through a pretest administration of test anxiety inventory (TAI). The students found high in test anxiety constitute the population. The students have been considered appropriate for this study because they are usually the ones experiencing test anxiety. There are nine co-educational senior secondary schools with a total student population of 3867.

7.4. Sample and Sampling Technique

The sample for the study is 75 students. This comprises all the senior secondary school(SS 1 & SS 2) students that were identified with test anxiety from 2selected coeducational secondary schools. Three schools with the highest number of students with high level of test anxiety were the ones selected for this study from the pool of 9 coeducational secondary schools in Onitsha urban areas. The instrument, Test Anxiety Inventory was used for the identification of students with test anxiety problem. All the students identified with test anxiety were included in the study. The two schools with the highest number of students with test anxiety served as the experimental groups I and II respectively.

In Experimental group I, 36 students were identified with test anxiety problem while 39 students were identified to make up the Control. So, the actual participants for the study were 75 students.

7.5. Instrument for Data Collection

The instrument that was used for assessment is Test Anxiety Inventory (TAI) originally developed by [Spielberger et al. \(1976\)](#) but revalidated in Nigeria by [Omoluabi \(2003\)](#), Perafom Psychometric Centre (PPC) in (1997), and further revalidated by some researchers in 2004 ([Egbochukwu and Obadan, 2005](#)). TAI has been adapted to Nigerian context and have been used extensively in Nigeria. The Test Anxiety Inventory (TAI) is a self-report psychometric scale which was developed to measure individual differences in test anxiety as a situation-specific trait. The test is one paged and contains twenty items (see Appendix). Based on 4-point rating Scale, ranging from 1 (almost never), 2 (sometimes), 3 (often) to 4 (almost always) ([Spielberger et al., 1976](#)). The respondents were required to indicate how frequently they experience specific symptoms of anxiety before, during and after examinations. In addition to measuring individual differences in anxiety proneness in test situations, the TAI subscales assess worry and emotionality as major components of test anxiety. All responses of the twenty items on the TAI combined to yield a total score. The TAI total score ranged from 20 – 80, with higher score indicating a higher level of anxiety. Anxiety scale reads; Almost always = 4 points, Often = 3 points, Sometimes = 2 points, Almost never = 1 point.

Therefore, the 20 items possible score were $4 \times 20 = 80$, $3 \times 20 = 60$, $2 \times 20 = 40$ and $1 \times 20 = 20$. Students that score 40 and above were included in the study.

7.6. Validation of the Instrument

The instrument, Test Anxiety Inventory (TAI) was originally developed by [Spielberger et al. \(1976\)](#) but revalidated in Nigeria by [Omoluabi \(2003\)](#), and Perafom Psychometric Centre in 1997. The researcher therefore adopted the TAI and did not have to do any validation.

7.7. Reliability of the Instrument

Good psychometric properties have been reported as regards the TAI. Coefficient alpha of 0.92, and higher have been reported for TAI total scores (Spielberger *et al.*, 1976). Additionally, TAI has good internal consistency reliability among samples of secondary school and university students. Coefficient alphas of 0.88 and 0.90 respectively have been reported for both male and female samples. Test score stability over 2-4 weeks test-retest interval ranged from 0.80 to 0.81 for TAI (Spielberger *et al.*, 1976). The coefficients of reliability obtained from the Nigerian samples ranges from 0.73 to 0.79 (Omoluabi, 2003).

7.8. Method of Data Collection

All the senior secondary (SS1 & SS2) students from all the coeducational secondary schools were given the Test Anxiety Inventory to complete. The researcher and six well trained research assistants went round the secondary schools to distribute 1983copies of the questionnaire. Each participant was met in the individual class and was given the instrument TAI to respond to the items. The researcher gave an introductory instruction on how to complete the questionnaire to the students. The nature of the student's responses and the purpose for which it will serve was clearly explained to the students. The researcher, with the research assistants properly assisted and guided the students on how to respond to the questionnaire. The questionnaire sheets were collected from the students immediately they were through responding to the items and handed to the researcher for collation and scoring.

Each response was scored according to the specification on the TAI manual. Scores that are above the Nigeria norm (34.77 for males and 34.37 for females) indicate presence of test anxiety and scores below this show no problem with test anxiety. This enabled the researcher to identify test anxious students with high level of anxiety. A special request was made to the school principal for provision of adequate and conducive classroom for the administration of the treatment. The rooms were spacious, well ventilated, clean and noiseless, and well-lighted, equipped with matching chairs/seats for the participants.

7.9. Experimental Training and Training Procedure

The researcher obtained the consent of the school principalsfor carrying on with the research. The experimental training took place at the schools. On training days, the participants stayed in a conducive classroom within the school building.

The training programme held for twelve sessions of treatment and 5 sessions of neutral interactions for six weeks. The senior secondary school students (SS1 & SS2) who participated in the study formed groups in their respective schools. Each of the schools with the highest number of students with high level of test anxiety constituted a group; one experimental group and one control group. The participants in the experimental groups were exposed to Systematic Desensitisation. They participated in eighteen one-hour sessions which were held thrice a week, for six consecutive weeks.

After six weeks treatment and neutral interaction, the Test anxiety inventory was re-administered on all the participants in both the experimental and control groups, and was regarded as the post-test. The post-test was collated and given to the researcher for analysis. The researcher determined the statistical difference between the experimental and control group scaled scores.

7.10. Method of Data Analysis

The completed instruments were scored following the scoring instructions provided in the TAI manual. Scores that are above the Nigeria norm (34.77 for males and 34.37 for females) indicate presence of test anxiety and scores below this show no problem with test anxiety. The data relating to the research questions were analysed using the mean. The data relating to the null hypotheses were analysed using the Analysis of Co-variance (ANCOVA).

8. Results

Table-2. Pretest and Posttest Mean Scores of Students who received Self- management and those in the Control Group

Source of Variation	N	Pretest Mean	Posttest Mean	Mean Loss	Remarks
Self-management Technique	38	52.95	33.26	19.69	Effective
Control Group	39	51.26	46.08	5.18	

Norms = 34.54

Table 2 showed the pretest mean score of 52.95 and posttest mean score of 33.26 with mean loss 19.69 for the students treated with the self-management technique; as against pretest mean score of 51.26 and posttest mean score of 46.08 with mean loss of 5.18 for the students in the control group, hence the self-management technique was effective. Also, the posttest mean score 33.26 of the students treated with self-management technique was below the norm of 34.54.

Table-3. Pre-test Scores and Post-test Mean Scores Showing Gender Difference of students who received treatment and those in the control group.

Source of Variation	N	Pretest Mean	Posttest Mean	Mean Loss	Std. Deviation
MALE	38	51.2679	40.4286	10.8393	7.80875
FEMALE	39	52.0351	36.5263	15.5088	7.04096
TOTAL	77	51.6549	38.4602		7.65324
Difference in their mean loss				4.6695	

Table 3 indicates that with the mean loss of 10.8393 and 15.5088 for male and female students who received self-management treatment technique; there was a difference of 4.6695. This shows that the effect of systematic self-management technique in reducing test anxiety among secondary school students differ in terms of gender.

Table-4. ANCOVA on the mean scores of students treated with the self- management technique and those in the control group

Source of variation	SS	Df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	3231.282a	2	1615.641			
Intercept	879.177	1	879.177			
Pre-test Scores	71.108	1	71.108			
Treatment Models	3231.264	1	3231.264	129.46	3.98	S
Error	1847.030	74	24.960			
Residual	126763.000	77				
Corrected Total	5078.312	76				

P<.05

Table 4 showed that at the 0.05 level of significance, 1 df numerator and 76 df denominator, the calculated F 129.46 is greater than the critical F 3.98. Therefore, self-management technique was significant in reducing students test anxiety.

Table-5. ANCOVA on the mean scores of the male and female students treated with self-management technique

Source of variation	SS	Df	MS	Cal. F	Crit. F	P ≥ 0.05
Corrected Model	191.420a	4	47.855			
Intercept	711.551	1	711.551			
Pre-test Scores	14.187	1	14.187			
Gender	65.645	1	65.645	2.447		
Treatment Group	97.747	1	97.747	3.64	3.140	NS
Gender * Treatment Group	7.772	1	7.772	.290		
Error	1850.864	69	26.824			
Residual	89845.000	74				
Corrected Total	2042.284	73				

P<.05

Table 5 revealed that at the 0.05 level of significance, 1 df numerator and 73 df denominator, the calculated F 2.447 for Gender is less than the critical F 3.140. Therefore, there was no significant difference in the mean scores of male and female students exposed to Self-management technique in reducing test anxiety among secondary school students.

9. Discussion

9.1. The effectiveness of Self-management Technique

Findings from the data analysed indicated that Self-management technique is effective in reducing test anxiety among secondary school students. This result supports the earlier findings by Shearer *et al.* (1996) which concluded that self- management technique was effective in reducing test anxiety among students. Finding from this study is equally in line with previous study by Alberto and Troutman (2009) whose results indicated that the use of the self-monitoring intervention significantly increased the student's compliance with the classroom-preparedness skills for all the participants and successfully reduced their test anxiety level.

The finding from the study also is in line with some other studies like King-Sears and Carpenter (1997). King-Sears and Carpenter noted that the process of self-management actively involves students in monitoring and controlling their behaviours.

The result also indicated a significant difference in the mean scores of participants in the treatment group when compared with those in the control group. The result of the analysed data as shown in table 4 above revealed that calculated F 129.46 was greater than the critical F 3.98. This indicates that self-management technique really significant in reducing students test anxiety among students.

The result from the data analysed further indicated that there is no significant difference on the effect of Self-management technique in reducing test anxiety among male and female students in secondary schools. This result

from the study is in agreement with the finding from Egbochukwu and Obadan (2005) that Sex had no significant effect on the reduction of test anxiety of students. The study further agrees with the reports of other studies like Ugodulunwa (1998) and Ifeagwazi (2008).

10. Conclusions

The study investigated the effectiveness of Self-management technique in reducing test anxiety among secondary school students. This study confirms previous research that reported the positive effect of Self-management technique for various behaviours exhibited by test-anxious students. The following conclusions have been drawn from the study:

1. That Self-management is an effective treatment technique in reducing test anxiety among secondary school students.
2. The effectiveness of Self-management is significant in reducing test anxiety among secondary school students.
3. There is no significant difference on the effectiveness of Self-management in reducing test anxiety among male and female secondary school students.

The effect of test anxiety on secondary school students cannot be over-emphasised as many authors and researchers reviewed have observed. This study therefore is imperative and the finding much valuable.

11. Implications of the Study

The findings from this study have implications for counselling practice. This study serves as confirmatory evidence that the treatment technique, Self-management is efficacious in reducing test anxiety among secondary school students. In the light of this, there is need for guidance counsellors who are working to improve the students' test performance and classroom behaviours of their students to familiarise themselves with the technique as applied in this study and apply it in the behavioural change counselling activities.

Therefore, efforts must be geared towards ensuring that practising counsellors as well as those in training acquire and employ skills-involving intervention technique of this kind when dealing with students.

Recommendations

Based on the findings of this study, the following recommendations are hereby made:

1. Self-management technique should be adopted by school guidance counsellors and other allied professionals as an effective treatment helping test-anxious students and for promoting students' academic performance in schools. In enhancing academic achievement and mental health in school setting, support strategies such as educational guidance and counselling, teaching life skill programmes and psychotherapy should be promoted.
2. Counselling should be an integral part of any educational institution, especially at the secondary school level, in order to boost self-confidence and test-taking ability of the students. Behavioural management techniques have time and again proved that they are adjunct to education in a number of ways; thus they have to be imbibed as a way of life, for many to overcome such problems as test anxiety.
3. Governments and school administrators should give adequate support to counsellors and teachers alike, by providing conducive environment and giving adequate incentives to boost counselling activities in schools.

References

- Adeola, A. O. and Adedipe, N. O. (2003). Coping skills used in the treatment of test anxious students. *Nigerian Journal of Educational Psychology*, 2(1): www.ajaol.info/
- Akca, F. (2011). The relationship between test anxiety and learned helplessness. *Social Behaviour and Personality*, 39(1): 101-12.
- Alberto, P. A. and Troutman, A. C. (2009). *Applied behaviour analysis for teachers*. 8th edn: Merrill Prentice Hall: Upper Saddle River, N. J.:
- Ali, H. (1999). True and quasi experimental designs. cid.oxfordjournals.org
- Barry, L. and Messer, J. (2003). A practical application of self-management for students diagnosed with ADHD. *Journal of Positive Behavior Interventions*, 5(4): 238-48.
- Berger, V. (2005). Systematic desensitisation. www.simplypsychology.org
- Braver, T. S. (2008). Anxiety and cognitive efficiency: Cognitive, affective. *Behavioral Neuroscience*, 8(3): 239-53.
- Bufka, L., Barlow, F. and David, H. (2009). Anxiety. Microsoft Encarta [DVD]. Redmond, WA: Microsoft Corporation.
- Duffy, C. (2011). Systematic desensitization: A treatment from the learning approach. <http://gsspsychology.wordpress.com>
- Egbochukwu, E. O. and Obadan, N. O. (2005). Effects of systematic desensitisation (SD) therapy on the reduction of test anxiety among adolescents in Nigerian schools. *Journal of Instructional Psychology*, 32(4): <http://www.freepatentsonline.com>

- Egbochukwu, E. O., Obodo, B. and Obadan, N. O. (2008). Efficacy of rational- emotive behaviour therapy on the reduction of test anxiety among adolescents in secondary schools. *European Journal of Social Sciences*, 6(4): 152-164
- Ergene, T. (2003). *Effective interventions on test anxiety reduction*. Hacettepe University: Turkey. www.amtaa.org/res/ergene.pdf
- Gregor, A. (2005). Examination anxiety: live with it, control it or make it work for you? *School Psychology International*, 26(5): 617-35. spi.sagepub.com
- Harrington, H. and Harrington, C. (2006). Using research and theory to reach all learners. www.ideas.repec.org/
- Hembree, R. (1998). Correlates, causes, effects and treatment of test anxiety. *Review of Educational Research*, 58(1): 47-77.
- Ifeagwazi, M. C. (2008). Influence of demographic variables in test anxiety among students. *International Journal of Educational Research*, 8: 1-11.
- King-Sears and Carpenter (1997). *Self-Management for students with disability*. www.beachcenter.org
- Kondo, S. S. and Gifu, K. U. (1997). Strategies coping with test anxiety', anxiety, stress and coping. *An international Journal*, 10(2): 203-15.
- Lawani, P. (2011). Systematic desensitisation. www.buzzle.com
- Makinde, B. O. (2000). Behaviour modification strategies as a tool to reduce fears and anxiety in children and youth in lagos state. *West African Journal of counselling and Psychotherapy*, 1(2): 41-51.
- Mitchem, K. and Young, K. (2001). Adapting self-management programs for classwide use: Acceptability, feasibility, and effectiveness. *Remedial & Special Education*, 22(2): 75-88.
- Nwankwo, C. A., Obi, J. S. and Obi, I. (2014). Effects of study skills technique in reducing test anxiety among secondary school adolescents in anambra state. *General studies on education, science and public issues in Africa*, 4(1): 23- 37.
- Olorufemi-Olabisi, F. A. and Akomolafe, M. J. (2013). Effects of self-management technique on academic self-concept of under-achievers in secondary schools. *Journal of Education and Practice*, 4(6): 138-41.
- Omoluabi, P. F. (2003). Validation of test anxiety inventory for Nigerian samples. *Nigerian Journal of Basic and Applied Psychology*, 3(1): 37-47.
- Osiki, J. O. and Busari, A. O. (2006). Effects of self-statement monitoring technique in the reduction of test anxiety among adolescent under achievers in Ibadan metropolis. *The Nigerian Journal of Guidance and Counselling*, 8(1): 133-41.
- Sawyer, T. P. and Hollis-Sawyer, L. A. (2005). Predicting stereotype threat, test anxiety, and cognitive ability test performance: an examination of three models. *International Journal of Testing*, 5(3): 225-46.
- Segool, N. K. (2009). Test anxiety associated with high-stakes testing among elementary school children: Prevalence, predictors, and relationship to student performance. <http://udini.proquest.com>
- Shearer, D. D., Kohler, F. W., Buchan, K. A. and McCullough, K. M. (1996). Promoting independent interactions between pre-schoolers with autism and their nondisabled peers: An analysis of self-monitoring. *Early Education & Development*, 7(3): 205-20.
- Spielberger, C. D. (2005). *The nature, assessment, and reduction of test anxiety* In, *Academic benefits from test-anxiety reduction programs*. Symposium at the American Psychological Association Convention: Washington, D.C.
- Spielberger, C. D., Anton, W. D. and Bedell, J. (1976). *The nature and treatment of test anxiety*. In M. Zuckerman & C. D. Spielberger (Eds.) *Emotions and anxiety: new concepts, methods, and applications*. Lawrence Erlbaum Associates: Hillsdale, N. J. 317-45.
- Standen, A. (2005). Systematic desensitisation. <http://www.integratedsociopsychology.net/on>
- Stober, J. and Pekrun, R. (2004). Advances in test anxiety research. *Anxiety, Stress, and Coping*, 17(3): 205-11.
- Ugodulunwa, C. A. (1998). The relationship between test anxiety and junior secondary students' performance in mathematics. *Journal of Sciences: Technology and Mathematics Education*, 1(1): 11-25
- UN-HABITAT (2009). Structure plan for Onitsha and satellite towns. <http://www.unhabitat.org>
- Waschbush, D. A. and Hill, G. P. (2001). Alternative treatments for children with attention-deficit/hyperactivity disorder: What does the research say? *The Behavior Therapist*, 24: 161-71.
- Zeidner, M. (2004). *Test anxiety*. In Spielberger (Ed.). *Encyclopedia of Applied Psychology*. Academic Press: San Diego. 3: 545-56.