

Effects of Systematic Desensitization and Study Skills Counselling Therapies on Test-Anxiety in Physics among Senior Secondary School Students in Jalingo, Taraba State

Dr. Karfe, Abigail, Seth & Mrs. Ntasin, Angela Atim

¹*Federal Ministry of Education Abuja-Nigeria*

²*Faculty of Education, Taraba State University, Jalingo*

Corresponding Author: Dr. Karfe, Abigail

Abstract: The study is conceived with the objective of investigating the effects of systematic desensitization and study skills counseling therapies on test-anxiety in physics among senior secondary school students in Jalingo, Taraba State, Nigeria. The Quasi-experimental research design of non-randomized pre-test/post-test control group is adopted for the study. The researchers used purposive sampling technique to select a total of seventy-two (72) SS II students comprising of 36 males and 36 females who were found to be anxious and had poor achievement in physics. The study consisted of four groups: three treatment groups and the control group. Each of the treatments was carried out in six sessions. The study used two research instruments and they were: Test-Anxiety/Study Skills Questionnaire (TAQ) and Physics Achievement Test (PAT) for pre-test and post-test. The study was guided by four research hypotheses. The ANCOVA statistics was used to test the hypotheses at 0.05 level of significance. The results from the data analysis led to the rejection of the first three hypotheses while hypothesis number four is retained. The findings of the study revealed that systematic desensitization therapy (SDT), study skills counseling therapy (SSCT) and the combination of the two therapies (SDT/SSCT) were effective in the treatment of the behavior problem of test-anxiety and poor study skills. The study also revealed that the SDT/SSCT combined treatment was more effective than the other two techniques in controlling the disorder. Since the study has discovered the effectiveness of the counseling therapies on test-anxiety, it is concluded that although effects of test-anxiety in physics and poor study skills are enormous, effective counseling can successfully control the behavior problem of test-anxiety and poor study skills. It is thus recommended that authorities in the educational systems should take it as a priority to train school counselors in the use of systematic desensitization and study skill counseling therapies to helping the students with problems such as test-anxiety/poor study skills.

Keywords: Test-anxiety, Systematic Desensitization Therapy (SDT), Study Skills Counseling Therapy (SSCT), Achievement, Effects, Counseling therapies.

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I. INTRODUCTION

Education is thought-out as the first step for all human activities and the development of any country depends on its quality. Education plays important role in the development of human capital and is linked with individual's well-being and opportunities for better living (Memon, Joubish and Khurram 2010; Farooq, Chaudhry, Shafiq, and Berhanu 2011). As a result, educators, trainers, and researchers have long been interested in investigating variables contributing effectively to the quality of performance of learners (Farooq et al., 2011).

A common phenomenon that constitutes a universal cause of poor academic achievement among students worldwide is anxiety. It is a kind of self preoccupation which is manifested as self minimization and results in a negative cognitive evaluation, unfavorable physiological reactions, lack of concentration and academic failure. In the nowadays' vicious competitive environment, anxiety is found to be a common phenomenon in everyday life. According to Lenka and Kant (2012), anxiety plays a crucial role in human life and most people are victims of it in different ways. Test-anxiety is an educational problem experienced by students, and it is an undesirable reaction toward evaluation. Test-anxiety is the most problem that is faced by the students in their education worldwide (Khosravi & Bigdeli, 2008). Practically, students will feel some level of anxiety when they take a test/examination, but for some students, the level increases drastically and affects their achievement. Test-anxiety has risen with the use of tests in educational decision making. As a result, test-anxiety and its dimensions became one of the broadest research areas in recent years.

Most of the secondary school students experience high levels of test-anxiety during final examination compared to other students. Egbochukwu, Obodo and Obadan (2008) observed that many secondary school students usually feel uneasy, fearful and anxious as tests approach; some even go to the extent of feigning sickness. Students at all levels who suffer from test-anxiety most often choose and pursue careers which may not fully challenge their cognitive abilities. Such attitude shows that the students need help. The challenge of dealing with anxiety is not unique to adolescents only but is one among a variety of unpleasant emotional experiences that every human being encounters in different magnitudes at one time or another in life. Thus, anxiety is part of daily life that cannot be separate from people, so students who suffer from high levels of the behavior problem should be taught the best ways to control it.

In Nigeria, especially in Taraba State, most students experience anxiety during test/examinations. According to Nwankwo, Obi, and Obi (2014), most students at the verge of entering for school examinations are seen to exhibit some forms of anxiety, restlessness, trembling, fidgeting or panicking. It should not be the case, because tests are normal situations which one should not be afraid to participate. The effects of anxiety on an individual may vary depending on its interaction with the task performance process. Low to moderate anxiety is often deemed beneficial as it enables the body to discharge energy equivalent to the task at hand. High level of it, on the other hand, is devastating because it excites the body system above functioning capacity, and impacts negatively on task performance. The problem of test-anxiety which often leads to poor academic performance has become worrisome and unsatisfactory to students, counselors, teachers, school administrators, parents and the larger society. According to Ifeanyi, Anyamene and Nwokolo (2015), in the field of psychology and counseling, there are numerous counseling therapies to enhance adaptive behavior. These therapies are developed by psychologists and are geared towards the elimination of maladaptive such as fear, anxiety, neurosis, insecurity, and depression, among others.

Ifeanyi et al (2015) observed that various treatments have been developed or applied to test-anxiety. They include: behavioral approaches incorporating systematic desensitization, relaxation training, biofeedback, modeling, anxiety reduction technique, anxiety management training. Other behavioral techniques include cognitive approaches with rational emotive therapy, as well as cognitive-behavioral approaches such as cognitive-behavioral modification, stress-inoculation training and other cognitive-behavioral techniques (Duffy, 2011). Also, skill-deficit treatment approaches involving study skills training, test-taking skills training, skill deficit approaches, cognitive-behavioral and skill-focused treatment approaches combined.

Test-anxiety reduction programmes have gained widespread acceptance, and is used as a treatment for students and persons in different stages of education. According to Ifeanyi et al (2015), literature exists that describes the process and outcome of test-anxiety reduction programmes with students at a different level. Some of the behavioral modification treatments have proved to be effective in reducing test-anxiety levels of clients. Despite the affirmative domino effects of the behavioral interventions, and relaxation skills; test-anxiety issue among secondary school students remains a distressing condition which ought to be rectified. To address the problem of test-anxiety, the researchers used systematic desensitization therapy and study skills counseling therapy. According to McLeod (2008), systematic desensitization is a type of behavioral treatment based on the rule of classical conditioning. The therapy is targeted to removing the response of fear and replacing it with a relaxation response by the use of counter conditioning.

According to Egbule (2009), systematic desensitization is a therapy procedure based on social learning principles for the treatment of maladaptive fears. The anxious individual is trained to relax and imagine a graded sequence of scenes that are progressively more fear-provoking. By experiencing the stimuli during a relaxed state that is incompatible with fear, the emotional reaction to the stimuli is weakened slowly. Systematic desensitization technique is helpful when dealing with anxiety and other maladaptive. The individual is given some doses of what is feared until a relaxed response is built up (Mayange, 2014). According to Kolo and Mum (2015), systematic desensitization is a technique developed by Wolpe in his theory as a procedure used to eliminate anxiety and fear.

Study skills are the important factor influencing academic achievement of students. Based on the skill-deficit model, anxious students suffer from test-anxiety due to the inability of sufficient study skills and test-taking skills to approach test/examination. Study skills refer to the student's knowledge of appropriate study strategies and methods and the ability to manage time and other resources to meet the demands of the academic tasks. The purpose of the study skills therapy is to help students maximize the learning process. Thus, it is needed to provide regular study skills interventions to the students in general. In this way, their self-regulation in learning can be boosted. Numerous studies revealed that study skills have the constructive role on the academic performance of students in addition to education quality and students' intelligence. Rana and Kausar (2011) reported that, many students fail not because they lack ability but because they do not have adequate study skills. Study skills, therefore, can be seen as planned studying, organizing study environment, efficient reading, note-taking and efficient writing (Demir, Kilinc & Dogan, 2012). Study skills counseling therapy may assist anxious students to distinguish, recover and increase their study habits and test-taking skills. It can also improve

students' cognitive processes which affect the organization, processing, and retrieval of information. Through the study skills counseling, students are able to learn a variety of the test-taking skills which help in improving study abilities and in turn, academic achievement.

Otta and Ogazie (2014) reported that Systematic Desensitization (SD) and Study Behaviour Techniques (SBT) were effective in reducing test phobia. Similarly, Dawa (2007) in a related study affirmed that systematic desensitization and study skills counseling therapies are influential in controlling, managing and reducing test-anxiety and improving performance in physics. The study further reported that there was a clear direction as to the superiority of the treatments over the other; specifically, the combined treatment was found to be superior to the single mode. Ogbu (2007) noted that male students obtained a higher mean score on test anxiety than female students. Also, Ngwoke, Ossai, and Obikwelu (2013) studied the influence of study skills on test-anxiety of secondary school students in Nsukka urban, Enugu state, Nigeria. The findings of the study indicated that study skills had no significant influence on students' test-anxiety level.

Statement of the Problem

Students are expected to write an examination with an optimal level of anxiety. The observed situation is that students are prone to anxiety, leading most of them to experience poor performance in physics which is the requirement to study science-based courses in tertiary institutions. This study is necessitated by researcher's observation that students develop test-anxiety in physics which often lead to poor academic achievement and has become worrisome and unsatisfactory to students, counselors, teachers, school administrators, parents and the larger society. Thus, this study was an attempt to see if systematic desensitization and study skills counseling therapies could be used to solve the problem of test-anxiety and poor achievement of students in physics in secondary schools in Jalingo L.G.A. Taraba State.

Purpose of the Study

The purpose of the present study is to examine the effect of systematic desensitization and study skills counseling therapies on test-anxiety in physics among senior secondary school students in Jalingo Taraba state. Specifically, this study is to:

- (i) Determine the effect of systematic desensitization therapy (SDT) on test-anxiety in physics among senior secondary school students in Jalingo L.G.A. Taraba State.
- (ii) Determine how effective is study skills counseling therapy (SSCT) in reducing test-anxiety in physics among senior secondary school students in Jalingo L.G.A. Taraba State.
- (iii) Examine the effect of systematic desensitization therapy (SDT) and study skills counseling therapy (SSCT) combined on test-anxiety in physics among senior secondary school students in Jalingo L.G.A. Taraba State.
- (iv) Ascertain the effectiveness of systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) on male and female students' achievement in physics test after treatment.

Research Hypotheses

The null hypotheses formulated and tested at 0.05 level of significance are as follows.

HO₁: There is no significant mean difference in the effectiveness of systematic desensitization therapy in the reduction of test-anxiety in physics between the control group and the experimental group which is exposed to SDT after treatment.

HO₂: There is no significant mean difference in the effectiveness of the study skills counseling therapy in the reduction of test-anxiety in physics between the control group and the experimental group which is exposed to SSCT after treatment.

HO₃: There is no significant mean difference in the relative effectiveness of the combined systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) in the reduction of test-anxiety in physics between the control group and the experimental group treated with SDT/SSCT.

HO₄: There is no significant mean difference in the effectiveness of systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) on male and female students' achievement in physics examination after treatment.

The Significance of the Study

This study is of importance in the sense that its findings may provide bases for solving problems of test-anxiety among secondary school students. This study is significant because anxious students might acquire various methods of treating test-anxiety and it might equip them with skills on how to study effectively. The outcome of this study might also help students understand the extent to which test-anxiety may affect their studies and to know that despite the very effects of the disorder, school counselors may help them reduce the unwanted behavior. This study is also of significance about the teachers in the sense that the findings might form the bases for teachers' awareness and preparedness to help their test anxious students overcome test-anxiety

behavior. The study expects that being aware of the test-anxiety behavior among students; teachers should be in a position to help those students who exhibit such behavior. The outcome of this study may convince researchers and teachers that the application of counseling techniques such as the ones adopted in this study might be very helpful for school counselors in minimizing the effects of test-anxiety which threatens the general objectives of the educational system. The outcome of this study may also help the educational stakeholders understand the debilitating consequences of test-anxiety and introduce some measures that may lessen the anxiety-provoking features of test/examinations.

Examination bodies might also significantly benefit from the outcome of this study. Since it is the desired objective of any testing organization to give tests that have very high discrimination power, any condition that threatens that discrimination ability of the tests must be addressed to make the test more valid and reliable. Furthermore, the results of this study may be very significant to the counseling profession because it may further highlight the roles of counselors in reducing and controlling the effects of high test-anxiety, taking into consideration the differences of the backgrounds of the students. Also, counselors may be informed through the result of this study of ways of guiding or counseling students to develop study skills and also use combined systematic desensitization therapy and study skills counseling therapy to handle test-anxiety. The findings of the study may also sensitize decision-makers in the country's educational system, to recognize the unique roles of counselors and make it mandatory for decision makers to employ trained counselors in both public and private institutions of learning in the country.

The Scope of the Study

This study was carried out in Jalingo L.G.A. Taraba State, Nigeria. The SSII physics students were chosen for this study because they are next to the final year students and are going to get involved in preparing for external examinations soon. The present study would enhance students' achievement in the external examinations especially in physics. Regarding the period for the research, the 2016/2017 academic session is used.

II. METHODOLOGY

The quasi-experimental research design of non-randomized pretest-posttest control group is employed in this study. The target population for this study was 770 students. The total number of 373 students took part in the pre-test exercise out of the 770 students. It was from the analysis of the pre-test results that the test-anxious students and poor-achieving students in physics are identified, out of which the sample of 72 students is constituted. Purposive sampling technique was used to select the sample from the school for the study. In other words, only students who scored 80-135 on the test-anxiety questionnaire and have a score of 0-44 in the physics achievement test are selected for the study. The seventy-two students were made up of thirty-six females and thirty-six males. Since the study examined gender influence, therefore an equal number of the gender was determined to balance up. The students' ages that participated in the study ranged from 14-18 years old. The selected students were assigned to experimental and control groups by balloting. This study employed this technique to assign students to four (4) groups: Three (3) experimental groups and one (1) control group. Group A = Systematic Desensitization Therapy, Group B = Study Skills Counselling Therapy, Group C = Combined Systematic Desensitization Therapy and Study Skills Counselling Therapy, Group D = Control Group. The last group received placebo treatment on HIV/AIDS and Sexually Transmitted Diseases. Each group had 18 members, nine males, and nine females. Two instruments were used for data collection by the researchers. These included: Test-Anxiety Questionnaire (TAQ) and Physics Achievement Test (PAT). The physics content areas taught during the study are: Mechanics, Electricity, Matter, Unit, and Measurement. The items in the Physics Achievement Test were developed to cover knowledge, comprehension and application domain. After the treatment, the post-test was carried out on the sample almost immediately.

The instruments are validated through the face and content validation. The researchers conducted a pilot test using a sample of sixteen highly anxious and poor-achieving in physics students purposively selected from SS II physics students in Government College Jalingo, Taraba State. The sixteen subjects assigned to four groups corresponding to the four treatment groups of systematic desensitization therapy, study skills counseling therapy, the combined SDT/SSCT and the control group by balloting. Each group was seen twice a week for two weeks. At the end of the second week, the researchers administered the post-test on the students. The pilot test result was used to estimate the reliability coefficient of the items examined. Based on the findings, the reliability coefficient was 0.857. On the bases of the calculated reliability coefficient, the two instruments were considered reliable; and were used to collect the data for the study. Analysis of covariance (ANCOVA) statistics was employed to test hypotheses 1 – 4 at 0.05 level of significance.

III. RESULTS

HO₁: There is no significant mean difference in the effectiveness of systematic desensitization therapy in the reduction of test-anxiety in physics between the control group and the experimental group which are exposed to SDT aftertreatment.

Table 1 One-way Analysis of Covariance of systematic desensitization therapy (SDT) on the physics test-anxiety.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	117.459 ^a	2	58.730	1.438	.244	.040
Intercept	414.922	1	414.922	10.160	.002	.128
Pre-SDT	110.774	1	110.774	2.713	.101	.038
Group	5.457	1	5.457	7.134	.006	.002
Error	2817.819	69	40.838			
Total	80422.000	72				
Corrected Total	2935.278	71				

Source: Field survey, 2017

From Table 1, the results of the main effects (SDT) on the test-anxiety of students indicated by $F(1, 69) = 7.134$ is significant at $P < .05$. This result affirms that there is a difference between the physics test-anxiety of the students that received the systematic desensitization therapy and those who did not. Thus, the hypothesis of no significant difference is hereby rejected. That is, students who received SDT experienced less test-anxiety than those who did not.

HO₂: There is no significant mean difference in the effectiveness of the study skills counseling therapy in the reduction of test-anxiety in physics between the control group and the experimental group which are exposed to SSCT after treatment.

Table 2 One-way Analysis of Covariance of study skills counseling therapy (SSCT) on physics test-anxiety.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	29.155 ^a	2	14.578	1.264	.289	.035
Intercept	321.634	1	321.634	27.890	.000	.288
Pre-SSCT	17.114	1	17.114	1.484	.227	.021
Group	6.589	1	6.589	11.571	.002	.008
Error	795.720	69	11.532			
Total	34755.000	72				
Corrected Total	824.875	71				

Source: Field survey, 2017

Table 2 the results of the main effects (SSCT) on the test-anxiety of students indicated by $F(1, 69) = 11.571$ is significant at $P < .05$. This result affirms that there is a difference between the physics test-anxiety of the students that received the study skills counseling therapy and those who did not. Thus, the hypothesis of no significant difference is rejected. That is, students who received study skills counseling therapy experienced less test-anxiety than those who did not.

HO₃: There is no significant mean difference in the relative effectiveness of the combined systematic desensitization therapy and study skills counselling therapy (SDT/SSCT) in the reduction of test-anxiety in physics between the experimental group and the control group.

Table 3 One-way Analysis of Covariance of combined systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) on the physics test-anxiety.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	101.030 ^a	2	50.515	3.318	.042	.088
Intercept	271.279	1	271.279	17.816	.000	.205
Pre-SSCT	100.803	1	100.803	6.620	.012	.088
Group	1.263	1	1.263	10.083	.024	.001
Error	1050.622	69	15.226			
Total	51979.000	72				

Corrected Total 1151.653 71

Source: Field survey, 2017

Table 3, the results of the effects of the combined systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) on the test-anxiety of students indicated by $F(1, 69) = 10.083$ is significant at $P < .05$. This result affirms that there is a difference between the physics test-anxiety of the students that receive the systematic desensitization therapy and study skills counseling therapy combined and those not given. Thus, the hypothesis of no significant difference is rejected. That is, students who receive systematic desensitization therapy and study skills counseling therapy experienced less test-anxiety than those who do not.

HO₄: There is no significant mean difference in the effectiveness of systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) on male and female students' achievement in physics achievement test after treatment.

Table 4 One-way Analysis of Covariance of combined systematic desensitization therapy (SDT) and study skills counseling therapy (SSCT) on male and female students' achievement in physics examination.

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1548.690 ^a	2	774.345	5.465	.007	.176
Intercept	4807.894	1	4807.894	33.934	.000	.400
Pre-Achv	608.357	1	608.357	4.294	.043	.078
Sex	497.326	1	497.326	3.510	.067	.064
Error	7225.847	51	141.683			
Total	118575.000	54				
Corrected Total	8774.537	53				

Source: Field survey, 2017

Table 4, the results of the effectiveness of systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) on male and female students' achievement in physics examination indicated by $F(1, 51) = 3.510$ is not significant at $P < .05$. This result affirms that there is no difference between male and female students' achievement in physics examination. Thus, the hypothesis of no significant difference is accepted. That is, male and female students did not differ in physics examination after receiving the combined treatment of systematic desensitization therapy and study skills counseling therapy.

IV. DISCUSSION OF FINDINGS

The result indicated in table 1 shows that physics students who received systematic desensitization therapy experienced less test-anxiety than those who did not. The finding is consistent with the findings of Otta and Ogazie (2014) and Dawa (2007) who all pointed out that systematic desensitization technique was effective in reducing students' test-anxiety. The result in table 2 clearly showed that students who received study skills counseling therapy experienced less test-anxiety compared to those who are not exposed to the study skills counseling therapy. In another word, from the mean anxiety scores, students had lower test-anxiety when treated with study skills counseling technique than their control group counterparts, whose anxiety remained high. This finding is in agreement with the studies of Dawa (2007); Otta and Ogazie (2014) whose findings revealed that study skills technique was effective in reducing test-anxiety of students. However, the findings of this study are contrary to the findings of Ngwoke, Ossai, and Obikwelu (2013), whose study reported that study skills had no significant influence on students' test-anxiety.

Table 3 presented the result showing the statistically significant difference between the participants who received the combined treatment of systematic desensitization therapy and study skills counseling therapy (SDT/SSCT) and those who did not. The drastic reduction of test-anxiety using SDT/SSCT combined is in agreement with Dawa (2007), whose study proved that the use of SDT/SSCT was effective in controlling test-anxiety of students. The researchers observe that many research works on test-anxiety have not considered using the combination of two or more techniques in the control of students' test-anxiety. The results indicated in table 4 revealed that there is no statistically significant difference in the academic achievement of male and female students who received the combined treatment (SDT/SSCT). Since there was no significant mean difference in the effectiveness of systematic desensitization and study skills counseling therapies (SDT/SSCT) on male and female students' achievement in physics achievement test after treatment, hypothesis 4 is retained. These findings disagree with that of Ogbu (2007) who reported that male students obtained higher mean score

on test-anxiety than females, that is, the academic achievement of female students are higher than the male, since the researchers assumed that, the higher the test-anxiety, the lower the academic achievement of students.

V. CONCLUSION

From the results of this research, the use of systematic desensitization and study skills counseling techniques in helping students to reduce their test-anxiety has been successful, when it is considered that there is a significant drop in the mean scores of the students' test-anxiety after the treatments. The study concludes that systematic desensitization and study skills counseling techniques are very effective techniques in reducing the test-anxiety of students. The researchers conclude that the effects of test-anxiety in physics have enormous technological and socio-economic implications on the larger population. The reassuring fact which the result of this study has confirmed, however, is that effective counseling can successfully control the behavior problem. Therefore, teachers, parents, governments and stakeholders in education must join hands with counselors to reduce the students' test-anxiety to a minimal level.

VI. RECOMMENDATIONS

1. The study recommends that counselors who are directly in contact with students should be taught to acquire behavior modification techniques, such as systematic desensitization, to be able to detect and help students with high test-anxiety. These will not only help them in the success of their lessons but also in the general achievement of the educational system.
2. Schools counselors, as well as the teachers, should be trained to acquire study skills counseling techniques to detect poor study skills of students and how to reduce their effects on the students. On the other hand, students should take responsibility to seek help from counselors.
3. Since the combined systematic desensitization and study skills counseling techniques reduce test-anxiety of students, the school guidance and counseling masters/mistresses, and the teachers should be taught the skills of using the counseling technique to reduce test-anxiety symptoms and its effects among the students. In other words, efforts should go towards ensuring that the active counselors and those in training acquire and employ the combined intervention techniques when dealing with students' test-anxiety/poor study skills.
4. Governments and school administrators should give adequate support to counselors and teachers alike, by providing a favorable environment and sufficient incentives to boost counseling activities in schools. These would help to improve students' academic achievement.

REFERENCE

- [1]. Dawa, L. M. (2007). The influence of three counselling therapies on high examination anxiety in physics among senior secondary school students in Kaduna Polytechnic Staff School. A Research Project.
- [2]. Demir, S., Kilinc, M., & Dogan, A. (2012). The effect of curriculum for developing efficient studying skills on academic achievements and studying skills of learners. *International Electronic Journal of Elementary Education*, 4(3): 427-440.
- [3]. Duffy, C. (2011). Systematic desensitization: A treatment from the learning approach. <http://gsspsychology.wordpress.com>
- [4]. Egbochukwu, E. O., Obodo, B., & 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
- [5]. Egbule, J. F. (2009). Principles and techniques of behaviour modification. Mcasson department of counselling psychology. Delta State University. IVY international Training and counselling centre (IITCC) Abraka. (Global Network for human resources, Leadership Training and Manpower development, Research and Behaviour Therapy). Pp 236.
- [6]. Farooq, M. S., Chaudhry, A. H., Shafiq, M. & Berhanu, G. (2011). Factors affecting students' quality of academic performance: a case of secondary school level. *Journal of Quality and Technology Management*. 7(2):1-14.
- [7]. Ifeanyi, A.; Anyamene, A. & Nwokolo, C. (2015). Effects of systematic desensitization technique on test-anxiety among secondary school students. *International Journal of Humanities Social Sciences and Education*. 2(2): 167-178
- [8]. Khosravi, M. & Bigdeli, I. (2008). The relationship between personality factors and test anxiety among university students. *Journal of Behavioral Sciences*. 2 (1): 13-24.
- [9]. Kolo, F. D. & Mum Y.A. (2015). *Counselling Practices and Approaches*, Zaria: p.a ndahi press.
- [10]. Lawani, P. (2011). Systematic desensitisation. Retrieved from www.buzzle.com.

- [11]. Lenka, S. K., & Kant, R. (2012). A study of academic anxiety of special need's children in special reference to hearing impaired and learning disabled. *International Journal of Multidisciplinary Research*, 2 (2): 64-72.
- [12]. Mayange, L. T. (2014). *Principles of behaviour and family adjustment*. Suleja-Abuja: Jehoshaphat Printers.
- [13]. Mcleod, S. A. (2008). Systematic Desensitization. Retrieved from www.simply-psychology.org/Systematic-Desensitization.html 30th June 2016.
- [14]. Memon, G. R., Joubish, F. M. & Khurram, A. M. (2010). Impact of parental socio- economic status on students' educational achievements at secondary schools of district Malir, Karachi. *Middle-East Journal of Scientific Research*, 6(6):678-687.
- [15]. Ngwoke, D. U., Ossai, O. V. & Obikwelu, C. L. (2013). Influence of study skills on test anxiety of secondary school students in Nsukka urban. *Journal of Education and Practice*, 4 (17): 162
- [16]. Nwankwo, C. A., Obi, J. S. & 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)
- [17]. Ogbu, C.O. (2007) Relationship between student test-anxiety levels and academic achievement in secondary schools. Research publications. AResearch project presented to the department of educational Foundations University of Nigeria, Nsukka.
- [18]. Otta, F. E. & Ogazie, C. A. (2014). Effects of systematic desensitization and study behaviour techniques on the reduction of test phobia. *World journal of Education Research*, 1 (3): 1-7 www.wjer.org.
- [19]. Rana, S, & Kausar, R. (2011). Comparison of study habits and academic performance of Pakistani British and White British students. *Pakistani Journal of Social and Clinical Psychology*, Vol. 9, 21-26.

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