

Efficacy of Systematic Desensitization in Reducing Psychometric Phobia among Student Teachers in the University in Zaria

Yusufu Sule Dantani, Aleje Ochege Patrick Department of Educational Psychology School of General Education Federal College of Education, Zaria Kaduna State

ABSTRACT

This study investigated the efficacy of systematic desensitization in reducing psychometric phobia among student teachers in the university in Zaria, Kaduna State. Two research questions and two research hypotheses guided the study. A quasi-experimental research design was adopted for this study. A sample size of 120 300 level students from the Federal College of Education, Zaria affiliated to Ahmadu Bello University, Zaria and Uthman Dan Fodio University Sokoto were chosen from the entire population of the 300 level students. The instrument used for data collection was the Test Anxiety Questionnaire. The instrument reliability index was 0.78. Data related to the research questions were analysed using statistical meanwhile data related to the research hypotheses were analysed using Analysis of Covariance (ANCOVA). Findings from the study revealed that the systematic desensitization technique (experimental group) was effective in reducing psychometric phobia among student teachers as compared to those in the conventional method (control group). The results also revealed that there was no significant gender difference in the efficacy of systematic desensitization technique among student teachers' psychometric phobia. Based on the findings, it was recommended that the Systematic desensitization technique should be adopted by the Faculty of Education in Universities across the country as an effective treatment for psychometric phobia among student teachers their gender notwithstanding to improve their academic performance in statistical courses. The guidance counsellors should practice other forms of treatment (relaxation) techniques other than systematic desensitization with the student teachers and provide them with the cognitive tools to defeat the negative thoughts that they may have before, during and after statistics classes. The government and school administrators should give adequate support to counsellors and teachers alike, by providing a conducive environment and giving adequate financial support to boost their activities in the universities. The Counselling Association of Nigeria (CAN) should organise conferences and workshops to train its members on the current trends in the application of systematic desensitization in the treatment of psychometric phobia and other maladaptive behaviours in our universities.

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INTRODUCTION

Education plays a great role in the life of every nation on the surface of the earth; this can be seen in the light of the transformation and changes that the entire world had experienced in the recent past. Teacher education holds the key to other levels

of education and even the different professions that are making an impact globally today. Student teachers are trained with an allembracing curriculum that covers all areas of education, their area of specialization notwithstanding. The curriculum for teacher education exposed the student teachers to

^{*}Corresponding author: Aleje, O. P. Marick.aeje@gmail.com Department of Educational Psychology, School of General Education, Federal College of Education, Zaria. 2019 Faculty of Technology Education, ATBU Bauchi. All rights reserved



courses such as psychology, philosophy, curriculum, comparative education, sociology of education, guidance and counselling, as well as measurement and evaluation and statistics which are known as psychometric courses that involve some form of calculation. Students with a poor background in calculation find it difficult to pass psychometric courses as a result of The course of students' poor phobia. performance in statistics and measurement and evaluation in our teachers' training institutions is a phobia. Ihechukwu and Ugwuegbulam (2016) citing Aprebo stated that phobia is an academic disease whose virus has not yet been fully diagnosed for effective treatment in the class and the symptoms of this phobia are usually expressed in the faces of statistics students in their classes.

Phobia can be defined as an irrational fear for a particular thing, object or event. Based on this, a psychometric phobia is defined as an irrational fear of psychometric courses in our teacher education programme. According to Ford (2008), systematic desensitization technique is a range of psychotherapeutic technique that is informed by the understanding of the behavioural and cognitive therapies which is focused on behaviours causing distress and changing irrational thoughts and beliefs. Systematic desensitization is a behavioural technique whereby a person is gradually exposed to phobic producing object, event or place while being engaged in some types of relaxation at the same time to reduce the symptoms of (Lazovik, 2013). Systematic desensitization uses counter conditioning and learning theory to adequately deal with an array of behavioural challenges such as a psychometric phobia. A study conducted by Bokanola (2014) on the effectiveness of systematic desensitization in the treatment of test anxiety found systematic desensitization to be effective towards having clients replace their anxious feelings with relaxation.

Ranchman (2008) stated that the systematic desensitization technique aims to remove the fear response of phobia and substitute it with a relaxed response to the stimulus. This involves exposing the client to a low level of the phobic producing stimulus and giving the strong version of the stimulus when the phobia is no longer present.

Karfe and Ntasin (2019) investigated the effects of systematic desensitization and study skills counselling therapies on test anxiety in physics among senior secondary school students in Jalingo, Taraba State, Nigeria. The Quasi-experimental research design of a non-randomized pre-test/post-test control group is adopted for the study. The researchers used the 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 a 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 counselling therapy (SSCT) and combination of the two therapies (SDT/SSCT) were effective in the treatment of the behaviour 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 counselling therapies on test anxiety, it is concluded that although the effects of test anxiety in physics and poor study skills are enormous, effective counselling can successfully control the behaviour 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 counsellors in the use of systematic desensitization and study skill counselling therapies to helping the students with problems such as test-anxiety/poor study skills.

Anyamene, Igboanugo and Ezunu (2020) investigated the effect of systematic desensitization technique in the reduction of Test Anxiety among secondary school students in Onitsha North Local Government Area. Two



research questions and two null hypotheses guided the study. Quasi-experimental research was adopted in carrying out the study. A sample size of 82 SSI students from coeducational schools was chosen from a population of 475 students with test anxiety. The sample was derived from two schools selected using the purposive sampling technique based on the number of students that scored high on test anxiety. The instrument used for data collection was Spielberger's Test Anxiety Inventory. The instrument was reliable at 0.79 coefficients. Data relating to research questions were analyzed using statistical meanwhile data relating to hypothesis were analyzed using Analysis of Co-Variance (ANCOVA). Findings from the study revealed that the systematic desensitization technique was significantly effective in reducing secondary school students' test anxiety. It was also found that there was no gender difference in the effect of the systematic desensitization technique on test anxiety among secondary school students who participated in the experiment. Based on the findings, it was recommended that a systematic desensitization technique should be adopted as an effective treatment technique in treating secondary school students with test anxietv.

Nwani and Udechukwu (2013) study focused on the effect of systematic desensitization therapy (SDT) on the reduction of test anxiety on some identified test anxious undergraduates. A total of one hundred and twenty-five (125) males and females from the undergraduates psychology department in Ebonyi State University, Abakaliki participated in the study. They comprised 78 anxious and 48 non-anxious with the age range of 20-32 years, and a mean age of 25.60 years. Test anxiety inventory (TAI) developed by Spielberger (1980) was used to identify students who tested anxious. The study is a 2 x 2 factorial design and a two-way analysis of variance (ANOVA) was used for hypothesis testing. The result indicates that STD is effective in the test anxiety of students who were tested anxious, f(1,74) = 9.261, p<0.05). The result also showed that the entry test anxiety level of subjects was statistically significant on the level of reduction of test anxiety undergraduate, f(1.74) = 27.458, p<0.05. The result showed that sex had no

significant effect on the reduction of test anxiety undergraduates f(1,74) = 7.570, p<0.05. There was also a significant interaction effect on entry test anxiety level and therapy at the end of each treatment, f(1,74) = 4.513. p<0.05. Since SDT had shown to be effective in the reduction of test anxiety among undergraduates in Nigerian University samples, it is recommended that this therapy be used in the treatment of test anxiety. It is also recommended that before the treatment of test anxiety, the entry test anxiety level of participants must be considered to form a base for the therapy.

Ohanaka and Adeleke (2019) investigated the efficacy of Systematic desensitization on academic boredom among students in Edo State Secondary Schools. The research used a quasi-experimental design adopting the pretest-posttest non-equivalent control group experiment. The population for the study consisted of One thousand, five hundred and eighty-two (1,582) SS2 students from Seven (7) public schools in the Oredo Local Government Area of Edo State. The sample for the study was made up of two intact classes comprising of 91 (Ninety-one) SS2 students. The instruments used for the study is the Boredom Proneness Scale (BPS). developed by Farmer and Sunberg, adapted from Obisanya with a test-retest reliability coefficient of 0.792. The findings of this study showed that Systematic desensitization was effective in reducing academic boredom. It was also more effective than the control group (non-attention). It is therefore recommended that reciprocal inhibition can be used to desensitize the students by counsellors. In the classroom, the teacher should note individual differences, engage students in classroom activities, use real-life situations and also make learning interesting.

Omeje, Oparanozie, Adikwu, Otu, Nwosu, Aneke, Omeje, Chigbu, Egeonu, Ezema, Nwobodo and Chijioke (2018) explored the effects of systematic desensitization on examination phobia of computer engineering students. Two research questions and one hypothesis guided the study. A true experimental research design was adopted for the study. A voluntary sampling technique was used to compose a sample of 60 students used for the study. The instruments for data collection were Student Examination Phobic



Traits Identification Questionnaire (SEPTIQ) and Examination Phobia Manifestation Scale (EPMS) developed by the researcher. The data collected for research were analyzed using descriptive statistics of mean and standard deviation while the hypothesis raised in the study was tested at P < 0.05 level of significance using ANCOVA. Results showed that computer engineering students exposed to treatments using systematic desensitization had a significant reduction in their examination phobia manifestation than those not exposed. In addition, gender was not found to be a significant factor influencing the manifestation of examination phobia. Based on the findings, the discussion was made. The educational counselling implications of the findings were highlighted. Subsequently, the conclusion and recommendation were proffered.

Rajiah and Saravanan (2014) effect of psychological analyzed the intervention on reducing performance anxiety and the consequences of the intervention on first-year pharmacy students. In their experimental 236 study, first-year undergraduate pharmacy students from a private university in Malaysia were approached between weeks 5 and 7 of their first semester to participate in the study. The completed responses for the Westside Test Anxiety Scale (WTAS), the Kessler Perceived Distress Scale (PDS), and the Academic Motivation Scale (AMS) were received from 225 students. Out of 225 students, 42 exhibited moderate to high test anxiety according to the WTAS (score ranging from 30 to 39) and were randomly placed into either an experiment group (n521) or a waiting list control group (n521). The prevalence of test anxiety among pharmacy students in this study was lower compared to other university students in previous studies. The present study's anxiety management of psychoeducation and systematic education for test anxiety reduced lack of motivation and psychological distress and improved grade point average (GPA). The psychological intervention helped significantly reduce scores of test anxiety, psychological distress, and lack of motivation, and it helped improve students' GPA.

Ifeanyi, Anyamene and Nwokolo (2015) investigated the Effect of the Systematic Desensitisation 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 quasi-experimental research and employed a 2x2 factorial design pre-test-posttest experimental control group, comprising two groups (Experimental group and control) using treatment group (Systematic Desensitisation Technique (SDT). population comprised all the secondary school students in Onitsha urban areas with test anxiety. A total of 75 students were selected from three 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 posttest. 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 the systematic desensitisation technique was effective and significant in reducing test anxiety. The study further revealed that the difference in the effectiveness of the systematic desensitisation technique in reducing test anxiety of male and female students is not significant. 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 the Systematic Desensitisation technique should be utilised by guidance counsellors in reducing test anxiety among secondary school students in the State and the Nation in general.

Statement of the Problem

The need to sensitize students on the requirements of effective academic success which will eventually lead to meaningful contribution towards development of the individual and the society has become important than ever. This leads to exploring ways and means of reducing psychological elements that in one way or the other may constitute an obstacle to achieving vital educational progress. Phobia has over time been discovered to be one of the psychological factors that deprive students especially student teachers of the golden opportunity provided by education in maximizing their educational potentials. If this



academic threat is not addressed early enough, there is the tendency that the academic of the students may be endangered. One major danger of this is the ability of the threat factor to limit the future academic endeavour of the student in the area of study. Hence, a phobia can result in failure and unsuccessful effort in the academic arena. This in essence can lead to frustration and eventually discourage the student from putting more effort into a successful outcome.

Objectives of the Study

The purpose of this study was to examine the efficacy of systematic desensitization in reducing psychometric phobia among student teachers in the university. Specifically, the study sought to determine:

- The efficacy of systematic desensitization technique in reducing psychometric phobia among student teachers when compared to those treated with the conventional technique using their pre-test and post-test scores.
- The difference in the efficacy of systematic desensitization technique on the psychometric phobia among male and female student teachers using their pre-test and post-test scores.

Research Questions

- 1. What is the efficacy of the systematic desensitization technique in reducing psychometric phobia among student teachers when compared to those treated with the conventional technique using their pre-test and post-test scores?
- What is the difference in the efficacy of the systematic desensitization technique on the psychometric phobia among male and female student teachers using their pre-test and post-test scores?

Hypotheses

The following null hypotheses were tested at a 0.05 level of significance:

 There is no significant difference in the efficacy of the systematic desensitization technique on

- psychometric phobia among student teachers in the university when compared with those treated with the conventional method using their post-test scores.
- There is no significant difference in the efficacy of systematic desensitization technique on psychometric phobia among male and female students using their posttest scores

METHODOLOGY

The quasi-experimental research design was adopted for this study in which pretest, post-test, control group was employed in this study. The pre-test was at the outset of the research study. This was followed by the treatment session which lasted for (6) six weeks using systematic desensitization that was administered to the experimental group within the stated period. Post-test came at the end of the treatment session and it was administered to both experimental and control groups. Hence, the experiment consisted of two groups, the treatment group which is the experimental group and the control group. An instrument titled: Test-Anxiety Questionnaire (TAQ) was given to both the experimental and control group to facilitate the effective outcome of the pre-test and post-test. A benchmark of 2.50 was used to determine one with or without psychometric phobia. This gave a composed sample of 120 students that were used for both the experimental and the control group. Random sampling was used to assign the 60 students to the experimental group for systematic desensitization and 60 students to the control group. The reliability index was 0.78. The population for the study consisted of one thousand, two hundred and twenty-four (1, 224) 300 level students that offer statistics in educational psychology in the two universities that were affiliated to Federal College of Education, Zaria. The universities are Ahmadu Bello University, Zaria and Uthman Dan Fodio University, Sokoto. The sample size of this study consisted of 60 300 level students from each of the universities were sampled from the population. A sample size of 120 (60 male and 60 female) students of an equal number of 60 students for the experimental group and 60 students for the control were selected through a purposive sampling technique for the study.

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RESULTS

Research Question One: What is the efficacy of the systematic desensitization technique in reducing psychometric phobia among student teachers when compared to those treated with the conventional technique using their pre-test and post-test scores?

Table 1: Pre-test and Post-test Psychometric Phobia Mean Scores of Student Teachers Treated with Systematic Desensitization Technique and those in the Conventional Method

Source of Variation	N	Pre-test Mean	Post-test Mean	Mean Lost	Remark
Systematic Desensitization	60	75.33	43.15	32.18	Effective
Control	60	58.52	52.10	6.42	

Table 1 revealed that student teachers treated with systematic desensitization technique had a pre-test mean score of 75.33 and the post-test mean score of 43.15 with a mean loss of 32.18 in their psychometric phobia, while those in the control group who received conventional method had a pre-test mean score of 58.52 and the post-test mean score of 52.10 with a mean loss of 6.42. With a post-test mean score of 43.15, the

systematic desensitization technique was effective in reducing psychometric phobia among student teachers.

Research Question Two: What is the difference in the efficacy of the systematic desensitization technique on the psychometric phobia among male and female student teachers using their pre-test and post-test scores?

Table 2: Pre-test and Post-test Psychometric Phobia Mean Scores of Male and Female Student Teachers Treated with Systematic Desensitization Technique

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Source of Variation	N	Pre-test Mean	Post-test Mean	Mean Lost	Remark			
Male	36	64.11	40.30	23.81	No difference			
Female	24	64.31	41.29	23.02				

Table 2 indicates that male student teachers treated with systematic desensitization technique had a pre-test mean score of 64.11 and the post-test mean score of 40.30 with a mean loss of 23.81, while female student teachers in the group had a pre-test mean score of 64.31 and a post-test mean score of 41.29 with a mean loss of 23.02. Hence. the systematic desensitization technique does not differ in its efficacy on male

and female student teachers psychometric phobia.

Hypothesis One: There is no significant difference in the efficacy of the systematic desensitization technique on psychometric phobia among student teachers in the university when compared with those treated with the conventional method using their posttest scores.

Table 3: ANCOVA on the Post-test Psychometric Phobia Mean Scores of Student Teachers Treated with Systematic Desensitization Technique and those using Conventional Method

Source o	f SS	Df	MS	Cal. F	Pvalue	P< 0.05
Variation						
Corrected Model	9591.743	2	4795.872			
Intercept	2844.114	1	2844.114			
Pre-test	42.751	1	42.751			
Treatment Model	9541.159	1	9541.159	86.15	0.00	S
Error	8749.732	117	110.756			
Total	157581.000	120				
Corrected Total	18341	119				

^{*}Corresponding author: Aleje, O. P. Marick.aeje@gmail.com Department of Educational Psychology, School of General Education, Federal College of Education, Zaria. 2019 Faculty of Technology Education, ATBU Bauchi. All rights reserved



Table 3 shows that at 0.05 level of significance 1df numerator and 119df denominator, the calculated F is 86.15 with a P-value of 0.00 which is less than 0.05. Therefore, the first null hypothesis is rejected. So, the efficacy of the systematic desensitization technique in reducing

psychometric phobia scores among student teachers was significant.

Hypothesis Two: There is no significant difference in the efficacy of the systematic desensitization technique on psychometric phobia among male and female students using their post-test scores.

Table 4: ANCOVA on the Post-test Psychometric Phobia Mean Scores of Male and Female Student Teachers Treated with Systematic Desensitization Technique

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Source	of	SS	df	MS	Cal. F	P-value	P< 0.05
Variation							
Corrected Model		23.381	2	11.690	•		
Intercept		1304.185	1	1304.185			
Pre-test		12.869	1	12.869			
Gender		10.642	1	10.642	0.12	0.734	NS
Error		3627.410	57	90.685			
Total		44788.000	60				
Corrected Total		3650.791	59				

Table 4 revealed that at 0.05 level of significance, 1df numerator and 59df denominator, the calculated F is 0.12 with a P-value of 0.73 which is greater than 0.05. Therefore, the second null hypothesis is accepted. So, the difference in the efficacy of the systematic desensitization technique on male and female student teachers' psychometric phobia is not significant.

DISCUSSION OF THE FINDINGS

This study investigated the efficacy of systematic desensitization in reducing psychometric phobia among student teachers in the university. The findings of the study indicated that the systematic desensitization technique was effective in reducing psychometric phobia among student teachers as compared to those in the conventional method. Specifically, the finding indicated that student teachers in both the systematic desensitization technique and the conventional method exhibited some elements ٥f psychometric phobia before commencement of the study as measured by their scores on the pre-test. The findings also indicated that the extent of the mean difference between systematic desensitization technique and conventional method was significant in the post-test score.

Moreover, the systematic desensitization technique group reported a significant decrease in psychometric phobia

than the conventional method group. This shows that the student teachers in the systematic desensitization technique group gained a better understanding of the phobic condition as a result of receiving systematic desensitization training. The findings of this study are in line with previous researches that reported that systematic desensitization was effective on test anxiety among students (Bokanola, 2014; Karfe & Ntasin, 2019; Anyamene, Igboanugo, & Ezunu, 2020; Nwani & Udechukwu, 2013).

One of the reasons for the decrease psychometric phobia among student teachers in the systematic desensitization treatment group that the conventional group is due to the phobic counter-conditioning training to which the student teachers were exposed during the study. In buttressing this point, Lazovi (2013) observed that during systematic desensitization treatment, the students are exposed to phobic-producing object, event or place while being engaged in some type of relaxation at the same time to reduce the symptoms of phobia. Systematic desensitization uses the theory of learning and counter-conditioning to effectively deal with a wide range of behavioural problems such as a psychometric phobia. This may therefore imply that the phobic feelings of the student teachers during statistics have been gradually replaced with relaxation and self-assurance during a systematic desensitization treatment session.

^{*}Corresponding author: Aleje, O. P. Marick.aeje@gmail.com Department of Educational Psychology, School of General Education, Federal College of Education, Zaria. 2019 Faculty of Technology Education, ATBU Bauchi. All rights reserved



The findings of this study also revealed that there was no significant gender difference in the efficacy of systematic desensitization technique among student teachers' psychometric phobia. The result of the study revealed that the systematic desensitization technique does not differ in its efficacy in reducing psychometric phobia among male and female student teachers. This implies that the male and female student teachers benefitted equally from systematic desensitization treatment. This finding is consistent with that of Anyamene, Igboanugo and Ezunu (2020) who found no gender difference in the efficacy of systematic desensitization technique in reducing psychometric phobia among student teachers. This may be because both male and female student teachers were treated with the same systematic desensitization treatment package at the same and condition. Moreover, the student teachers' participated willingly on their own without being compelled and were given equal opportunities and the needed attention during the study.

CONCLUSION

This study investigated the relative efficacy of the systematic desensitization technique in reducing psychometric phobia among student teachers in the university. In line with the findings of this study, it was concluded that the systematic desensitization technique was significantly effective in reducing psychometric phobia among student teachers. It was also concluded that there was no gender difference in the efficacy of systematic desensitization on psychometric phobia among student teachers in the university who participated in the study.

RECOMMENDATIONS

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

 Systematic desensitization technique should be adopted by the Faculty of Education in Universities across the country as an effective treatment for psychometric phobia among student teachers their gender notwithstanding to improve their academic performance in statistical courses.

- The guidance counsellors should practice other forms of treatment (relaxation) techniques other than systematic desensitization with the student teachers and provide them with the cognitive tools to defeat the negative thoughts that may have before, during and after statistics classes.
- 3. The government and school administrators should give adequate support to counsellors and teachers alike, by providing a conducive environment and giving adequate financial support to boost their activities in the universities.
- 4. The Counselling Association of Nigeria (CAN) should organise conferences and workshops to train its members on the current trends in the application of systematic desensitization in the treatment of psychometric phobia and other maladaptive behaviours in our universities.

REFERENCES

Anyamene, A, Igboanugo, L.N and Ezunu, E. N. (2020). Effect of Systematic Desensitization Technique in reducing Test Anxiety among Secondary School Students in Anambra State. *Journal of Guidance and Counselling Studies*. Vol. 4, Issue 2, 192-204.

Bokanola, J. N. (2014). Effectiveness of Systematic Desensitization Technique and Meditation on Test-Anxiety among Secondary School Students in Katsina Metropolis.

Journal of Research and Practice. 10(3), 130-140.

Ford, J. (2008). Calming Techniques.

Retrieved from www.mediate.com

Ifeanyi, A; Anyamene, A. and 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.

Ihechukwu, N.B and Ugwuegbulam, C.N. (2016). Causes and Solutions of Mathematics Phobia among Secondary School Students.

Research on Humanities and Social Sciences. Vol. 6 No.20



JOURNAL OF SCIECNCE TECHNOLOGY AND EDUCATION 9(2), JUNE, 2021 ISSN: 2277-0011; Journal homepage: www.atbuftejoste.com

Karfe, A.S and Ntasin, A.A. (2019). Effects of Systematic Desensitization and Study Skills Counselling Therapies on Test-Anxiety in Physics among Senior Secondary School Students in Jalingo, Taraba State. IOSR Journal of Humanities and Social Science. Vol. 24, Issue 10. 10-17.

Lazovik, K.W. (2013). Treatment of Test-Anxiety by Cue-Controlled Desensitization and Study Skills Training. *Journal of Counselling Psychology*. 25. 217-224.

Nwani, B.E and Udechukwu, D.C. (2013).

Systematic Desensitization Therapy
as Panacea for the Reduction of
Test-Anxiety among University
Undergraduates. ANSU Journal
of Arts and Social Sciences. 2(1): 99-106.

Ohanaka, B.I and Adeleke, I.O. (2019).

Efficacy of Systematic

Desensitization Therapy on
Academic Bordom among
Adolescents in Edo State Secondary
Schools. Journal of Education and
Social Research, Vol.9, No.2

Omeje, J. C; Oparanozie, C. I; Adikwu, V. O., Out, M.S; Nwosu, N.C; Aneke, A.O; Omeje, P. N; Chigbu, E. F; Egeonu, D.C; Ezema, V.S; Nwobodo, P and Chijioke, O.L. (2018). Effects of Systematic Desensitization on Examination Phobia of Computer Engineering Students in Nigeria. International Journal of u and e-Service, Science and Technology. Vol. 11, No.2, 29-38.

Rajiah, K and Saravanan, C. (2014). The Effectiveness of Psychoeducation and Systematic Desensitization to reduce Test Anxiety among First-Year Pharmacy Students. *American Journal of Pharmaceutical Education*. 78(9).

Ranchman, K.L. (2008). Significant Predictors of Test-Anxiety among Students with and without Learning Disabilities. *Journal of Learning Disabilities*. 40: 360-376.