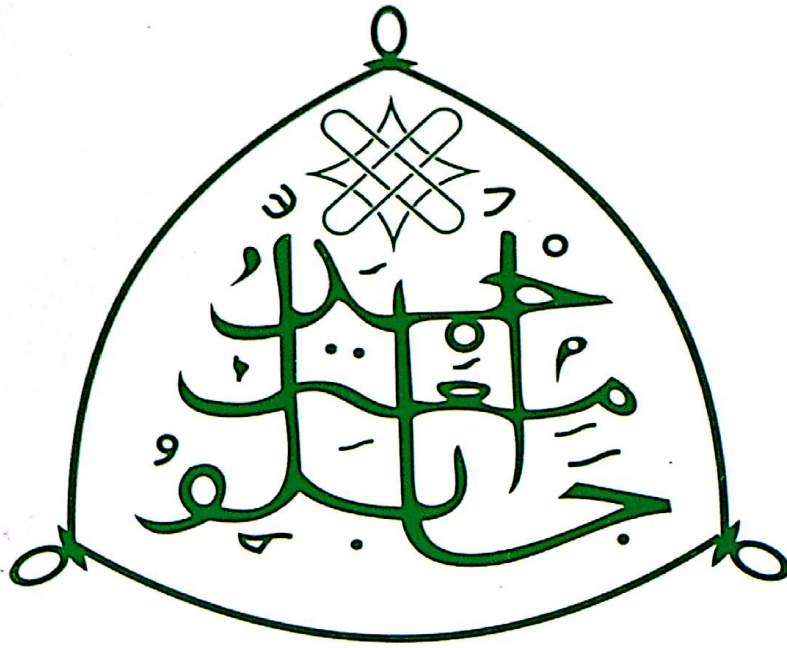




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EFFECT OF GRADED EXPOSURE COUNSELLING TECHNIQUE ON TEST ANXIETY AMONG SECONDARY SCHOOL STUDENTS IN ILORIN METROPOLIS, KWARA STATE, NIGERIA

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Abstract

This study examined the effect of graded exposure counselling technique on test anxiety among secondary school students in Ilorin metropolis Kwara State, Nigeria. The research aimed to determine the technique's effect on physiological, cognitive, behavioural, and emotional components of test anxiety. It employed a quasi-experimental design, focusing on 15 SS2 students identified with high test anxiety. Using a Test Anxiety Checklist and Student Test Anxiety Scales, the study measured anxiety levels before and after a six week graded exposure treatment programme. Data analysed using paired sample t-tests to compare pre-test and post-test scores. The findings revealed that graded exposure counselling technique had significant effect on physiological ($t = 20.38, p = 0.001$), cognitive ($t = 20.70, p = 0.001$), behavioural ($t = 20.73, p = 0.001$) and emotional ($t = 11.81, p = 0.001$) components of test anxiety among secondary school students in Ilorin metropolis. The study therefore concluded that graded exposure technique is effective in reducing test anxiety among secondary school students in Ilorin metropolis. Based on this, it was recommended among others that, Professional Counsellors and Psychologists should employ Graded Exposure Technique to assist students to overcome test anxiety.

Keywords: *graded exposure, test anxiety, physiological component, cognitive component, behavioural component, emotional component and Ilorin metropolis*

Introduction

Test anxiety has emerged as a global concern for educational stakeholders due to its widespread prevalence and the significant impact it has on students across various academic settings. It causes a range of physiological, behavioral, cognitive, and emotional challenges for students before, during, and after the test taken. McDonald (2010) characterizes test anxiety as a psychological condition where students experience intense fear, panic, and distress related to a test they are about to take, are currently taking, or have recently completed. These anxiety responses can significantly hinder their academic performance and overall well-being. Test anxiety is not confined to a specific region or demographic; it affects students

globally, with varying degrees of severity. The intensity of test anxiety often depends on the perceived importance of the test, particularly in relation to external and promotional tests. These high-stakes tests, which often determine academic progression or future opportunities, tend to heighten the anxiety experienced by students. As such, test anxiety is a growing issue that calls for attention from educators, policymakers, and mental health professionals to develop strategies for alleviating its effects and supporting students in overcoming the challenges it presents.

Test anxiety has been a great challenge to every secondary school students. McDonald (2010) estimated that 10-40% of all students worldwide are severely affected by test anxiety. Also, in 2015 in United States about 30% and 20% of girls and boys respectively affected by test anxiety. In Nigeria, there is also prevalence of test anxiety among secondary school students. Bada, Chua. Collier and Idiko (2021) maintained that there is high rate of test anxiety among secondary school students in Nigeria. It has also been revealed that between 25% - 40% of secondary school students in Nigeria experience test anxiety in their academic performances (Cassady, 2010). Akinsola and Nwajei (2013) affirmed further that secondary school students experienced some test anxiety before and during test situations. Equally, Secondary school students in Ilorin metropolis also experience test anxiety such as: worry, faster heartbeats, fear, restlessness and sweat before and during examination (Omosidi & Adigun, 2014).

Test anxiety can be diagnosed and psychologically treated using a particular treatment intervention strategy or a combination of one or more therapies such as graded exposure, test-taking-skills training, study-skills training, cognitive restructuring, relaxation training, behaviour rehearsal, modelling among other counselling techniques (Ahmed, 2016; Springer & Tolin, 2020; Kaczurkin & Foa, 2022). This study however focused on the graded exposure counselling technique to treat test anxiety among secondary school students in Ilorin metropolis. Graded exposure counselling technique is a counselling technique enrooted in the school of behaviourism which makes conscious effort in introducing the client to the anxiety provoking tasks on a gradual process of exposing the client to anxiety-induced stimulus until such a task becomes less anxiety provoking task for the client. This process, brings the client more closely to reality, builds up confidence in him or her and makes him or her to become less anxious in the face of the perceived anxiety provoking task. Graded Exposure (GE) counselling technique can be seen as a useful counselling technique in the treatment of anxiety related disorders such as test anxiety. Graded exposure counselling technique has been found to be efficacious in the treatment of test anxiety, school phobia, panic disorder, anxiety disorder, agoraphobia, obsessive-compulsive disorder, post-traumatic stress disorder (PTSD) and anger management (Tolin, 2011; Carbonel, 2014). Also, it has the influence and efficacy proof of weakening the connections between maladaptive thoughts and the prevailing distressing situations faced by the individuals that are anxious in nature. Furthermore, graded exposure technique is not just making the clients to gradually face the feared event, situation or object on step by step basis, but also has power over such situation to be reduced and eventually eliminated.

Statement of the Problem

Ideally, students should approach tests with confidence and a positive mindset, as assessments serve as essential tools for measuring academic progress and facilitating smooth transitions between educational levels. In an optimal scenario, test administration remains a fundamental exercise in secondary schools, ensuring fair and accurate placement of individuals. With proper preparation, effective study strategies, and a supportive learning environment, students can minimize anxiety and perform to the best of their abilities. In Ilorin metropolis, secondary school students preparing for external examinations

such as the West African Examination Council (WAEC), West African School Certificate Examination (WASCE), Unified Tertiary Matriculation Examination (UTME), and National Examination Council (NECO) should ideally experience reduced anxiety through structured guidance, motivation, and a focus on holistic academic development. In this way, test anxiety ceases to be a major concern, allowing students to excel with confidence and composure. However, Secondary school students in Ilorin metropolis experience test anxieties such as: worry, faster heartbeats, fear, restlessness, sweaty hands, lack of concentration, lack of good time management, lack of note taking, lack of consistent review and practice on past questions and lack of understanding of questions before and during tests.

Test anxiety can be frustrating to secondary school students and even to their parents if it is left untreated. Such behaviour may lead to examination malpractice, a punishable offence under the law which could lead the perpetrator to jail term. The problem can result to poor preparation and poor attitudes towards other areas of life. If test anxiety continues to persist in the lives of secondary school students, its consequences are possible to interfere with student's future ambitions, prevent parents from realizing their aim of sending their children to school, and leads to monetary efforts loss. Graded exposure was used as a counselling technique for reducing test anxiety to the best knowledge of the researchers no similar study was conducted in the study area to address this problem. In view of these, the researchers were motivated to undertake this study in attempt to address test anxiety among secondary school students in Ilorin metropolis, Kwara State, Nigeria.

Objectives of the Study

The objectives of this study are to determine the:

1. effect of graded exposure on physiological component of test anxiety among secondary school students in Ilorin metropolis, Kwara State.
2. effect of graded exposure on cognitive component of test anxiety among secondary school students in Ilorin metropolis, Kwara State.
3. effect of graded exposure on behavioural component of test anxiety among secondary school students in Ilorin metropolis, Kwara State.
4. effect of graded exposure on emotional component of test anxiety among secondary school students in Ilorin metropolis, Kwara State.

Hypotheses

The following hypotheses were tested in this study:

- H0₁:** There is no significant difference between the pre-test and post-test mean scores of Physiological component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State.
- H0₂:** There is no significant difference between the pre-test and post-test mean scores of cognitive component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State.
- H0₃:** There is no significant difference between the pre-test and post-test mean scores of behavioural component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State.

H0₄ There is no significant difference between the pre-test and post-test mean scores of emotional component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State.

Methodology

A quasi-experimental research design involving non-randomized pre-test-post-test design was used for the study. This experimental design is considered appropriate because this design involves treatment groups design only. It implies a design without random assignment of subjects. The design is symbolically represented below:

<i>Group</i>	<i>Pre-test</i>	<i>Treatment</i>	<i>Post-test</i>
TG ₁	O ₁	X	O ₂

Key:

TG = refers to treatment group

O₁ = refer to observation before treatment (Pre-test)

X = refers to treatment administered to treatment group (Graded Exposure).

O₂ = refer to observation after the treatment (Post-test).

The population of this study comprised twenty five (25) SS II students identified with test anxiety using "Test Anxiety Checklist" (TAC) from senior secondary schools in Ilorin Metropolis, Kwara State.

A total number of fifteen (15) test anxious students were selected using simple random sampling technique. The choice of this technique ensured that every student has equal and independent chance of being included. In order to achieve the number needed for the sample, at St' Anthony's Secondary School, the researcher wrote 15 "YES" and 10 "NO" on pieces of paper and asked the 25 students to pick one each. Those who picked "YES" formed the sample size for the study. The use of fifteen (15) students as sample is in line with Roscoe (1975 as cited in Ado 2017) who suggested a small sample size from the target population in an experimental research.

Students Test Anxiety Scale (STAS) was used as the instrument for data collection. The instrument was used to obtain the pre-test and post-test scores of the respondents. It was adapted from Shukla (2013) and consisted four different components which are: physiological, behavioural, cognitive and emotional components. The instrument consists of 10 items on each component making a total number of 40 items on the instrument. The instrument was patterned along 5 point Likert scale of; Very Much True of Me (VMTM); Very True of Me (VTM); Moderately True of Me (MTM); Slightly True of Me (STM) and Not True of Me (NTM).

The content validity of the instrument was established with the help of experts in the Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria. A pilot testing was conducted using 10 students identified with text anxiety in Government Day Secondary School, Tanke. After an interval of two weeks, another 10 copies of the same instrument were administered on the same set of students to determine the stability of the instrument. The instrument had reliability coefficient of .80.

The treatment procedure were conducted in three phases for the purpose of this study. They are: pre treatment phase, treatment phase and post-treatment phase. These phases are presented as follows:

Pre-Treatment Phase: This is the first phase where baseline data were collected. This was done a week before the commencement of the treatment programmes by administering the Student Test Anxiety Scale to SS II test anxious students. The baseline data that were collected were scored and kept to serve as pre-test and were later compared with the post-test scores for inferences to be drawn on the effect of the treatment on the dependent variable.

Treatment Procedure: In order not to disrupt the present school programme of the selected school, the use of graded exposure was done on the two treatment groups during the students' free periods. The selected students from St' Anthony secondary school were exposed to graded exposure for the period of six (6) weeks, with two sessions per week. There were eleven (11) sessions for the treatment which lasted for a period of 30-45 minutes for the treatment to be conducted every Wednesday of the six (6) treatment weeks.

Post Treatment Phase: After pre-treatment and treatment phases, the next stage is post treatment phase. This was done by re-administering the Student Test Anxiety Scale to SS II test anxious students after 6 weeks of the treatment programme. The data (post-test) that were collected were compared with that of pre-test in order to determine the effect of the treatment technique (graded exposure). The data that were collected were coded and analyzed using inferential statistics. The inferential statistics of paired sample t-test was used to test hypotheses 1-4 where the focus of the researcher is to establish the differences between pre-test and post-test scores. All the hypotheses were tested at 0.05 level of significance.

Results

Hypothesis One: There is no significant difference in the pre-test and post test mean scores of physiological component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State

Table 1: Paired Sample t-test on Differences between the Pre-Test and Post-Test Mean Scores of Graded Exposure Treatment on the Physiological Component of Test Anxiety

Treatment	Variables	N	Mean	SD	Df	t	p
GE	Pre-test	15	38.27	3.75	14	20.38	0.001
	Post-test	15	14.47	2.03			

* Significant, $p < 0.05$

Table 1 revealed pre-test mean score of 38.27 and standard deviation of 3.75. Post-test mean score reduced to 14.47 and standard deviation to 2.03 with the degree of freedom of 14 and $t = 20.38$. The table also shows $p = 0.001$. From the table, the p-value was found to be lesser than the 0.05 level of significance. This implies that there is a significant effect of graded exposure on physiological component of test anxiety. Therefore, the null hypothesis which states that there is no significant effect of graded exposure on physiological component of test anxiety among secondary school students in Ilorin metropolis was rejected.

Hypothesis Two: There is no significant difference in the pre-test and post-test mean scores of cognitive component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State.

Table 2: Paired Sample t-test on Differences between the Pre-Test and Post-Test Mean Scores of Graded Exposure Treatment on the Cognitive Component of Test Anxiety

Treatment	Variables	N	Mean	SD	df	t	p
GE	Pre-test	15	36.13	2.53	14	20.70	0.001
	Post-test	15	15.13	2.29			

* Significant, $p < 0.05$

Table 2 revealed pre-test mean score of 36.13 and standard deviation of 2.53. Post-test mean score reduced to 15.13 and standard deviation to 2.29 with the degree of freedom of 14 and $t = 20.70$. The table also shows $p = 0.001$. From the table, the p-value was found to be lesser than the 0.05 level of significance. This implies that there is a significant effect of graded exposure on cognitive component of test anxiety. Therefore, the null hypothesis which states that there is no significant effect of graded exposure on cognitive component of test anxiety among secondary school students in Ilorin metropolis was rejected.

Hypothesis Three:

There is no significant difference in the pre-test and post-test mean scores of behavioural component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State

Table 3: Paired Sample t-test on Differences between the Pre-Test and Post-Test Mean Scores of Graded Exposure Treatment on the Behavioural Component of Test Anxiety

Treatment	Variables	N	Mean	SD	df	t	p
GE	Pre-test	15	35.87	3.18	14	20.73	0.001
	Post-test	15	13.93	1.75			

* Significant, $p < 0.05$

Table 3 revealed pre-test mean score of 35.87 and standard deviation of 3.18. Post-test mean score reduced to 13.93 and standard deviation to 1.75 with the degree of freedom of 14 and $t = 20.73$. The table also shows $p = 0.001$. From the table, the p-value was found to be lesser than the 0.05 level of significance. This implies that there is a significant effect of graded exposure on behavioural component of test anxiety. Therefore, the null hypothesis which states that there is no significant effect of graded exposure on behavioural component of test anxiety among secondary school students in Ilorin metropolis was rejected.

Hypothesis Four:

There is no significant difference in the pre-test and post-test mean scores of emotional component of test anxiety among secondary school students exposed to graded exposure in Ilorin metropolis, Kwara State

Table 4: Paired Sample t-test on Differences between the Pre-Test and Post-Test Mean Scores of Graded Exposure Treatment on the Emotional Component of Test Anxiety

Treatment	Variables	N	Mean	SD	df	t	p
GE	Pre-test	15	32.80	2.98	14	11.81	0.001
	Post-test	15	15.40	3.94			

* Significant, $p < 0.05$

Table 4 revealed pre-test mean score of 32.80 and standard deviation of 2.98. Post-test mean score reduced to 15.40 and standard deviation to 3.94 with the degree of freedom of 14 and $t = 11.81$. The table also shows $p = 0.001$. From the table, the p-value was found to be lesser than the 0.05 level of significance. This implies that there is a significant effect of graded exposure on emotional component of test anxiety. Therefore, the null hypothesis which states that there is no significant effect of graded exposure on emotional component of test anxiety among secondary school students in Ilorin metropolis was rejected.

Summary of the Findings

The findings of this study revealed significant effect of:

1. Graded exposure on physiological component of test anxiety among secondary school students in Ilorin metropolis, Kwara State ($t = 20.38$, $p = 0.001$).
2. Graded exposure on cognitive component of test anxiety among secondary school students in Ilorin metropolis, Kwara State ($t = 20.70$, $p = 0.001$).
3. Graded exposure on behavioural component of test anxiety among secondary school students in Ilorin metropolis, Kwara State ($t = 20.73$, $p = 0.001$).
4. Graded exposure on emotional component of test anxiety among secondary school students in Ilorin metropolis, Kwara State ($t = 11.81$, $p = 0.001$).

Discussion

The first finding of the study revealed that graded exposure has significant effect on physiological component of test anxiety among secondary school students in Ilorin metropolis, Kwara State. This means that graded exposure has helped in reducing the level of physiological component of test anxiety among secondary school students in Ilorin metropolis. This finding is in line with the finding of Lowe, Lee, Witteborg, Prichard, Luhr, Cullinan and Janik (2008) who found that targeted intervention of graded exposure significantly reduce the physiological symptoms of test anxiety. Similarly, another study by Putwain (2007) highlighted the prevalence of test anxiety among school children and suggested that interventions focusing on gradual exposure to test environments could alleviate both the psychological and physiological impacts of test anxiety. Theoretically, this finding was supported by Pavlov's classical conditioning theory which states that learning is a process of associating a behaviour with situations and conditioning not only help in learning a desirable behaviour but also help in eliminating, avoiding or unlearning of undesirable behaviour. The reason for this finding could be that through the process of graded exposure, students developed coping mechanisms that could help them manage their physiological responses to anxiety-inducing situations more effectively.

The finding revealed that graded exposure has significant effect on cognitive component of test anxiety among secondary school students in Ilorin metropolis, Kwara State. This implies that graded exposure technique has helped in reducing the cognitive symptoms of test anxiety among the participants who found that graded exposure interventions significantly reduced cognitive test anxiety in secondary school students. von der Embse, Jester, Roy and Post (2018) confirmed the efficacy of graded exposure in addressing cognitive aspects of test anxiety. Similarly, Owens, Stevenson, Hadwin, and Norgate (2019) indicated that students who participated in graded exposure sessions experienced a significant decrease in worry and intrusive thoughts during tests. The reason for this could be that graded exposure often involves cognitive restructuring, where students learn to challenge and change their negative thoughts about tests. Theoretically, this finding was in support of Ellis Abert's ABC theory which focuses on helping individuals deal with irrational beliefs and learn how to manage their thoughts, emotions and behaviour in a healthier and realistic way.

The finding showed that graded exposure has significant effect on behavioural component of test anxiety among secondary school students in Ilorin metropolis, Kwara State. This implies that graded exposure technique is effective in treating behavioural component of test anxiety among secondary school students. This finding is similar to the finding of Thompson and Suzuki (2021) who found that graded exposure techniques consistently produced moderate to large effect sizes in improving test-taking behaviours across various cultural contexts. Similarly, Gonzalez-Cabrera, Fernandez-Prada, Iribar-Ibabe and Peinado (2018) reported that participants in graded exposure group exhibited improvements in their test-taking behaviours, such as increased attendance on exam days and reduced instances of "freezing" or leaving exams unfinished. The implication of this finding is that graded exposure has led to behavioural changes. As students repeatedly confront and manage their test anxiety, they can alter their patterns of response. This can result in improved focus, better study habits, and enhanced performance during tests. Ivan Pavlov supported this finding whereby an individual is faced with the test conditions and learn a process of eliminating the undesirable behaviour.

The finding also revealed that there was a significant effect of graded exposure on emotional component of test anxiety among secondary school students in Ilorin metropolis, Kwara State. This means that graded exposure technique worked effectively in reducing emotional symptoms of test anxiety among the participants. This finding is in tandem with the finding of Elliott and Place (2019) who asserted that graded exposure helps students confront and manage their fears in a gradual way, which leads to a decrease in the emotional intensity of the anxiety response. The finding is also in line with the study of Cassidy and Thomas (2020) which stated that graded exposure technique can lead to significant improvements in both academic and emotional outcomes for students with test anxiety. This could be that graded exposure has assisted the students to develop more positive and realistic thoughts about their abilities and the testing process. This finding is in support of Ellis Abert's theory which help individuals to identify irrational beliefs and negative thoughts patterns that may lead to emotional issues while individuals learn how to manage their thoughts and emotions in a healthy way.

Conclusion

Based on the findings from the study conducted among secondary school students in Ilorin metropolis, Kwara State, it was revealed that the graded exposure have significant effects on the physiological, cognitive, behavioural, and emotional components of test anxiety. This is concluded that

graded exposure technique is effective in reducing test anxiety among secondary school students in Ilorin metropolis.

Recommendations

Based on the findings of this study, it was recommended that:

- (a) School Counsellors and Educational psychologists should be encouraged to make effective use of graded exposure technique in reducing physiological, cognitive, behavioural and emotional components of test anxiety among secondary school students.
- (b) Workshops and seminars should be organized for teachers and parents on how they could employ graded exposure technique in their students and children to help them reduce test anxiety.
- (c) Professional counsellors and psychologists should include the use of graded exposure technique in the secondary school programmes to assist students to learn how to face their related test anxiety in a gradual process and overcome them.

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