

CONTROLLING EXAMOPHOBIA AMONG COLLEGES OF EDUCATION STUDENTS USING ASSERTIVENESS TRAINING AND COGNITIVE RESTRUCTURING

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Abstract

This study examined the effectiveness of assertiveness training and cognitive restructuring on examophobia among Colleges of Education students in Kwara state. The study adopted quasi experimental research design with pretest, posttest, non-randomized and non-equivalent control group of 3x2x2 factorial design. The experimental groups were exposed to assertiveness training and cognitive restructuring treatments while the control group was taught using the lecture method. The instruments used for data collection were Examination Phobia Scale and Adapted Study Habits Inventory while descriptive statistics, and ANCOVA were used to analyze data. The study revealed that cognitive restructuring and assertiveness training were effective techniques for treating examophobia. However, students' gender and study habits were not determinants in the effectiveness of cognitive restructuring and assertiveness training techniques in treating examophobia. Also, the study found that there was no significant interaction effect of gender, study habits and treatments on examophobia among students. Therefore, the study recommended the establishment of modern student counselling and human development centres in the Colleges of Education.

Keywords: assertiveness training, cognitive restructuring, examophobia, study habit

Introduction

Examinations are structured assessment techniques designed to evaluate an individual's knowledge and skills through a well-organized set of questions or tasks which provides a standardized measure for students' mastery of specified education goals and serves as bases for promotion and award of certificate upon completion of academic programme at a given level (Khatoon & Parveen, 2009; Oduwaiye, 2014). In educational settings, particularly in higher education institutions, critical decisions regarding students are often influenced by test and examination scores. These scores are regarded as valid and reliable indicators of a learner's academic capabilities and achievement levels. Thus, students' awareness of the importance of examination results in their academic pursuit, often leads to anxiety and

emotional distress ahead of the examination. This condition is commonly referred to as “examination phobia or examophobia”, reflecting the intense fear and apprehension associated with the examination process.

Examophobia is a psychological condition characterized by intense anxiety, worry, and irrational fear experienced by students before or during examinations which transcends typical test related stress, significantly impairing mental faculties and negatively impacting cognitive abilities. This condition manifests as a result of pronounced fear response in affected individuals and leads to detrimental effects on the learners’ personalities and academic performance (Berk & Nanda, 2006; Cassady & Johnson, 2002; Sindhu, 2015). The prevalence and severity of this issue necessitates the adoption of strategies for alleviating student anxiety. One of the approaches used in controlling anxiety is assertiveness training. This method enhances affected individuals’ social skills and emotional resilience. Assertiveness involves expression of one's feelings, either positive or negative and as well respecting the rights of others (Paterson et al., 2002). The absence of assertive behavior can stem from a lack of social competence, leading to behavioral deficiencies that hinder adaptability in social contexts. This deficiency often results in a social deficit that contributes to feelings of uncertainty (Paneva & Mavrodiev, 2013). Furthermore, self-defeating behaviors such as fears, worries, social anxieties, and various forms of aggression are closely linked to unassertiveness (Noble & McGrath, 2005). Addressing examophobia through assertiveness training not only empowers students to manage their fears but also fosters a healthier approach to academic challenges. By cultivating assertive communication and coping strategies, students can mitigate the adverse effects of examination anxiety on their learning outcomes and overall well-being.

Assertiveness training is a systematic approach aimed at enhancing interpersonal relationships and boosting self-confidence. It is a form of behavioral therapy that addresses anxiety and enables individuals to express themselves more effectively. Assertiveness training empowers individuals to articulate their thoughts, feelings, and emotions in a balanced manner that facilitates a transformation in self-perception and helps to reduce anxiety, which often hinders clear and direct communication (Manesh et al., 2015; Thanga & Yusof, 2016; Turner et al., 2008). Thus, this training involves various techniques that enrich participants social interactions and emotional health, consequently, fostering greater self-esteem and alleviating anxiety.

Also, cognitive restructuring is another strategy recognized for its effectiveness in managing specific phobias, such as examination anxiety. Cognitive restructuring is a component of Cognitive Behavioral Therapy (CBT) rooted in Rational Emotive Therapy (RET) which emphasizes the impact of individual thought processes on the interpretation of events and demonstrates efficiency across different anxiety disorders. This technique can be described as an insightful behavioral method that focuses on identifying and altering negative thoughts and maladaptive beliefs. It assists clients in recognizing, disputing, and challenging negative interpretations while promoting the development of healthier thought patterns (Ngwoke & Numonde, 2013; Roth et al., 2002; Salman et al., 2010). Basically, cognitive restructuring serves as a structured approach that encourages individuals to confront and modify detrimental thinking patterns, leading to enhanced emotional well-being and improved coping mechanisms.

Experience has shown that many students perform below their ability level due to certain inherent factors impeding their optimal cognitive functioning. Of most importance factors inhibiting individual performance in evaluation situation might be examination phobia. Individuals' inability to perform optimally could have a far-reaching effect on their achievement of the set goals in the short-run and psychological well-being in the long-run (Farroqi et al., 2012; Rafiq et al., 2007).

Several studies have been conducted on reduction of examination phobia among students either in secondary, polytechnic or university with the application of various therapeutic techniques. These include techniques such as study skills, assertiveness training and cognitive restructuring to enhance students' performance. For instance, Makinde and Akinteye (2013) conducted a study to evaluate the effectiveness of mentoring and assertiveness training in enhancing self-confidence among adolescents. They randomly selected 96 adolescents from three public schools in Lagos State, Nigeria, employing both descriptive survey and quasi-experimental designs for their research. The results indicated that both mentoring and assertiveness training significantly improved the self-confidence of the participants.

Chinwe (2014) investigated the effectiveness of assertiveness training and systematic desensitization in alleviating examination phobia among university students, involving 60 randomly selected undergraduates. The study concluded that both techniques effectively reduced examination phobia. Similarly, Daryoush et al. (2014) explored the impact of assertiveness training on medical students, finding it beneficial in treating social anxiety and enhancing happiness in Ibadan, Nigeria.

Ayemoba (2021) investigated the efficacy of cognitive and behavioral therapies in managing examination anxiety. The study was conducted in Ibadan, Nigeria and findings revealed that cognitive restructuring therapy was effective in improving the academic performance of secondary school students. Also, Jalil, Rahim, and Parviz (2013) studied the effectiveness of cognitive training on test anxiety among 60 high school girls in Tabriz, Iran, finding a significant reduction in anxiety symptoms in the experimental group compared to the control group. Likewise, Ngwoke and Numonde (2013) investigated the impact of cognitive restructuring on test anxiety among 135 low-achieving students, concluding that this strategy effectively reduced test anxiety compared to a control group. Similarly, Bethany (2014) assessed a single-session cognitive restructuring and mindfulness approach to decrease post-event processing in socially anxious individuals in Toronto. The study, involving 74 participants, indicated that both cognitive restructuring and mindfulness strategies effectively reduced post-event processing and distress, although they did not significantly lower state anxiety compared to the control condition.

Additionally, Asikhia (2014) investigated the impact of cognitive restructuring training on reducing mathematics anxiety among 180 senior secondary school students in Ogun State, Nigeria. The study found a significant effect of the treatment on students' anxiety levels ($F = 5.81, P < .05$), although the interaction effects with study habits and gender were not significant. In a separate study by Okoiye, Chinwe, and Nwoga (2015), cognitive restructuring was shown to effectively enhance self-esteem among female undergraduates who had experienced relationship violence, with significant improvements in pre- and post-treatment self-esteem scores ($F(2, 87) = 43.884, P < .05$). Afolabi-Ige (2016) also

explored cognitive restructuring therapy and test-taking skills training for managing examination anxiety among undergraduates in Southwestern Nigeria. The results indicated a significant main effect of treatment on examination anxiety management ($p < .05$), but no significant interactions with gender or field of study.

The foregoing shows that there is a shortage of studies on adoption of assertiveness training and cognitive restructuring in controlling examophobia among Colleges of Education students, especially in Kwara State. Therefore, this study becomes imperative due to the fact that students in colleges of education receive training that lead to the award of professional certificate. Thus, the researchers seek to examine the;

- (i) effectiveness of assertiveness training and cognitive restructuring on examophobia among Colleges of Education students in Kwara State,
- (ii) effectiveness of assertiveness training and cognitive restructuring on examophobia among Colleges of Education students in Kwara State on the basis of gender and
- (iii) effectiveness of assertiveness training and cognitive restructuring on examophobia among colleges of education students in Kwara State on the basis of learner' study habits.

Method

Design

This study adopted quasi experimental research design with pretest, posttest, nonrandomized and non-equivalent control group of $3 \times 2 \times 2$ factorial design. The independent variables involved in this study are psychological treatment which exists at three levels (cognitive restructuring, assertiveness training technique and placebo for control group) and two moderating variables comprise gender (male and female) and study habit (good or poor). This design is further schematized in Table 1.

Table 1. Schematized experimental design for the study

E	O ₁	X ₁	M/F	P/G	O ₂
	O ₁	X ₂	M/F	P/G	O ₂
C	O ₁	X ₀	M/F	P/G	O ₂

E = Experimental group, C = Control group, O₁ = pre-test, O₂ = post-test, X₁ = Cognitive Restructuring Technique, X₂ = Assertiveness Training Technique, X₀ = placebo, M/F = Male or Female, P/G = Poor or Good study habit

Participants

Students in NCE 1 constituted participants in this study. The choice of students in NCE1 was premised on the fact that they were relatively new on campus and they were yet to familiarize themselves with examination procedures in higher institutions and thus, may be apprehensive. Prior to the intervention, the Examination Phobia Scale (EPS) was administered on all 139 students in NCE1 studying Social Studies in the three selected institutions. The scores obtained were used as a screening criterion. Out of these 139 students, a total of 10 students were excluded as a result of their screening tests scores that fell below the threshold of 19 points. In other words, the screening test outcome showed that 10 students were not examination phobic and were excluded from the study participants. Therefore, the sample size for the study comprised 129 students in NCE1 studying Agricultural

Science in the three institutions. All the participants agreed and volunteered to participate in this study. All data is used for research and kept confidential to ensure the participants' privacy.

Instrumentation

Examination Phobia Scale (EPS) and Study Habits Inventory (SHI) were used as instruments for data collection. Examination Phobia Scale was adapted from Test Anxiety Questionnaire (TAQ) developed by Mandler and Sarason (1952) to measure students' anxiety in tests and examination while Study Habits Inventory (SHI) developed by Bakare (1977) was adapted and used to measure students' study habits in this study. Items on EPS contained a modified version of TAQ and the response pattern is "True or False" with maximum and minimum obtainable scores as 37 and 0 respectively. Students with 19 points and above on this scale were screened as examination phobic and were selected as participants in this study. Also, the adapted version of SHI that was used for this study comprised 33 items on 5 out of 8 sections in the original inventory which were considered as significant for students studying at College of Education level of education. The minimum and maximum scores obtainable were 33 and 165, students with scores of 33-98 were adjudged as having poor study habits while those with scores of 99-165 were adjudged as having good study habits.

Experimental procedure

The three colleges of education that were involved in the study were randomly assigned into three groups in which group one and two served as treatment groups while the third group served as control group. The following two intervention packages were developed for the two experimental groups:

i. Cognitive restructuring treatment package

Cognitive restructuring treatment package was developed and used to teach the participants in experimental group one on: (a) how to become conscious of their maladaptive thoughts and the influence of these thoughts and behaviour on their actions and reaction and (b) how those thoughts could be dislodged for more adaptive ones. This approach was adopted based on Albert Ellis Rational Emotive Behaviour Therapy of 1962 which explains that emotional disturbance and maladaptive behaviour exhibited result from some irrational beliefs. Based on the work of Albert Ellis, the sub-conscious irrational beliefs of the participants were presented with a view to helping exams phobic students identify those irrational and illogical thoughts statements that cause them to exhibit phobia in evaluation situations.

ii. Assertiveness training treatment package

Assertiveness training treatment package was also developed by the researcher based on Wolpe's assertiveness training technique and used on subjects in experimental group two. According to Wolpe (1958), behaving assertively in anxiety provoking situations is capable of inhibiting exhibition of anxiety and as a result, the individuals find it easier to behave assertively in these situations. This training focused on how students can learn how to become more assertive in their behaviour, especially in examinations.

The experimental sessions lasted for 9 weeks of one session per week for each group. Only participants in experimental groups A and B received treatment whereas participants in control group (C) were only exposed to lectures on drug abuse and its effect.

At the end of the experimental treatments, the researcher administered the same instrument, Examination Phobia Scale (EPS) on the participants to ascertain if there is any significant reduction in the phobia for examination. Adapted Study Habits Inventory was also administered to the participants in the three groups.

Data analysis

The data obtained from the respondents were analysed with descriptive statistics of percentage, mean and standard deviation, as well as Analysis of Covariance (ANCOVA) methods of statistics at 0.05, probability level of confidence. This method is appropriate for exploring the differences between groups while statistically controlling the covariate. Also, ANCOVA is found suitable where the researcher cannot randomize the participants into each group as was the case in the study.

Findings and Discussion

The results of analysis of data collected are presented in the following tables.

Table 2. Demographic characteristics of participants

Variable		Frequency	Percentage
Gender	Male	68	52.70
	Female	61	47.30
	Total	129	100
Study Habits	Good	50	38.80
	Poor	79	61.20
	Total	129	100

Table 2 showed that male students were in majority with 52.7% while their female counterparts had 47.3% percent of the total participants. Also, students with good study habits were in the majority with 61.2% while 38.8% of the students had poor study habits.

Table 3. Descriptive statistics of the participants' examophobia and study habits scores

Variable	Groups	Scores	N	Mean	SD
Examophobia	CRT	Pre-test		23.09	3.91
		Post-Test	45	16.58	4.87
		Pre-test		26.00	4.22
	AT	Post-Test	14	16.86	6.42
		Pre-test		27.06	3.25
		Post-Test	70	23.00	4.52
Study Habits	Control	Pre-test		109.20	14.61
		Post-Test	70	23.00	4.52
		Pre-test		114.00	15.39
	CRT	Post-Test	45	111.64	17.18
		Pre-test		106.36	13.23
		Post-Test	14	100.34	13.72
	AT	Post-Test	70	109.67	10.63

CRT= Cognitive Restructuring Technique, AT= Assertiveness Training

Table 3 shows that CRT group were 45 in numbers and their pre-test and post-test mean scores were 23.09 and 16.58 with respective standard deviation values of 3.91 and 4.87. Students in AT group were 14 in numbers and their pre-test and post-test mean scores were 26.00 and 16.86 with respective standard deviation values of 4.22 and 6.42. However, students in Control group were 70 in numbers and while their pre-test and post-test mean scores were 27.06 and 23.00, their respective standard deviation values were 3.25 and 4.52. Thus, students in Control group have the highest pre-test mean examophobia score, followed by those in AT group while students in CRT group has the least. Nevertheless, the pre-test mean scores of the three groups indicated a high level of examophobia. As regards post-test examophobia mean scores of the three groups, students in CRT group have the least, followed by those in AT group while the Control group has the highest. Moreover, table 3 shows that students in AT group have the highest pre-test score of 111.64 with Standard deviation of 17.18. This is followed by students in CRT group with mean of 109.20 and SD of 14.61 while those in Control group have pre-test mean score of 100.34. The post-test mean scores of the groups indicated that students in CRT group have the highest mean score of 114.00 and SD of 15.39 while students in Control group have mean of 109.67 and SD of 10.63, and students in AT group have mean of 106.36 and SD of 13.3. On the average, both pre and post-test mean scores showed that the students possessed good study habits.

Table 4. Test of ANCOVA for effectiveness of cognitive restructuring and assertiveness training on examophobia among students

Source of Variance	Type III Sum of Squares	df	Mean Square	F	P	η
Corrected Model	1317.677	4	329.419	13.776	0.000	0.308
Intercept	171.158	1	171.158	7.158	0.008	0.055
Phobia Pre-test	17.470	1	17.470	0.731	0.394	0.006
Study habits pre-test	11.524	1	11.524	0.482	0.489	0.004
Group	985.227	2	492.614	20.600	0.000	0.249
Error	2965.207	124	23.913			
Total	56364.000	129				
Corrected Total	4282.884	128				

η = Eta Squared

Table 4 shows that $F (2, 124) = 20.600, p = 0.000, p < 0.05$, this indicates that the effects of cognitive restructuring and assertiveness training on examophobia among students is statistically significant. Also, partial eta squared (η) = 0.249 implies that experimental treatment accounted for 24.9% of the observed variance in the dependent variable.

Table 5. Test of ANCOVA for effectiveness of cognitive restructuring and assertiveness training on examophobia among students based on gender

Source of Variance	Type III Sum of Squares	df	Mean Square	F	p	η
Corrected Model	24.200	2	12.100	0.435	0.649	0.015
Intercept	668.518	1	668.518	24.039	0.000	0.300
Phobia Pre-test	18.187	1	18.187	0.654	0.422	0.012
Gender	8.071	1	8.071	0.290	0.592	0.005
Error	1557.325	56	27.809			
Total	17926.000	59				
Corrected Total	1581.525	58				

Table 5 reveals that $(F_{1, 56}) = 0.290, p = 0.592, p > 0.05$, this shows that there is no significant effectiveness of cognitive restructuring and assertiveness training on examophobia among students based on gender. Similarly, the result shows that partial eta squared (η) = 0.005, which indicates that gender accounted for 0.5% of the difference observed in the dependent variable.

Table 6. Test of ANCOVA for effectiveness of cognitive restructuring and assertiveness training on examophobia among students based on study habits

Source of Variance	Type III Sum of Squares	df	Mean Square	F	p	η
Corrected Model	16.991	2	8.495	0.304	0.739	0.011
Intercept	575.846	1	575.846	20.611	0.000	0.269
Phobia Pre-test	13.600	1	13.600	0.487	0.488	0.009
Study Habits	.862	1	0.862	0.031	0.861	0.001
Error	1564.535	56	27.938			
Total	17926.000	59				
Corrected Total	1581.525	58				

Table 6 showed that $(F_{1, 56}) = 0.031, p = 0.861 (p > 0.05)$, this implies that there is no significant effectiveness of cognitive restructuring and assertiveness training on examophobia among students based on study habits. Students' study habit was able to account for 0.1% of the observed variance noticed in the dependent variable (partial eta squared (η) = 0.001).

Table 7. Test of ANCOVA for interaction effects of gender, study habits and treatments on examophobia among students

Source of Variance	Type III Sum of Squares	df	Mean Square	F	p	η
Corrected Model	194.096	8	24.262	0.874	0.544	0.123
Intercept	496.667	1	496.667	17.899	0.000	0.264
Phobia Pre-test	22.372	1	22.372	0.806	0.374	0.016
Sex	21.705	1	21.705	0.782	0.381	0.015
Study habits	30.689	1	30.689	1.106	0.298	0.022
Treatment	0.093	1	0.093	0.003	0.954	0.000
Gender * Study habits	17.222	1	17.222	0.621	0.435	0.012
Gender * Treatment	45.918	1	45.918	1.655	0.204	0.032
Study habits * Treatment	57.069	1	57.069	2.057	0.158	0.040
Gender * Study habits * Treatment	3.734	1	3.734	0.135	0.715	0.003
Error	1387.429	50	27.749			
Total	17926.000	59				
Corrected Total	1581.525	58				

$\eta = \text{Eta Squared}$

Table 7 reveals that the interaction effects of gender, study habits and treatments on examophobia among students is not statistically significant ($p = 0.715, p > 0.05$). Also, the interaction effect of gender, study habits and treatments accounted for 0.3% of the observed variance in the dependent variable (partial eta squared(η) = 0.003).

Discussions

The study adopted a quasi-experimental research design specifically a nonrandomized pretest, posttest, and control group design to investigate the effectiveness of assertiveness training and cognitive restructuring on examophobia among Colleges of Education students in Kwara State. The findings from the study showed that cognitive restructuring and assertiveness training were found to be effective techniques for treating examophobia among students. This aligns with previous findings (Ayemoba, 2021; Chinwe, 2014; Jalil et al., 2013; Ngwoke & Numonde, 2013). However, the study revealed that gender was not a determinant in the effectiveness of cognitive restructuring and assertiveness training techniques in treating examophobia among students. This agrees with findings of Afolabi-Ige (2016), Agberotimi et al. (2015), Asikhia (2014), and Lowe (2021) whereas, the findings contradict studies of Kajavintha (2015), Sankara and Nazia (2019) who reported that gender had significant effect. Similarly, it was discovered that the effectiveness of cognitive restructuring and assertiveness training techniques in treating examophobia was not affected by students' study habits. This indicated that the difference between male and female students' mean scores is not significant. This finding is consistent with the report of Asikhia (2014). Also, there was no significant interaction effect of gender, study habits and treatments on examophobia among students.

Conclusion

Following the findings of the study, it was concluded that cognitive restructuring and assertiveness training techniques are effective in the treatment of examophobia among Colleges of Education students in Kwara State, Nigeria. The implication is that students who experience examination phobia need therapeutic assistance so as to make the most of opportunity provided to attain his or her academic goals. Examination phobia can be minimized if not completely eliminated through the adoption of appropriate techniques such as cognitive restructuring and assertiveness training techniques.

Recommendations

Based on the results of this study, the following recommendations are made: There should be well-established student counselling and human development centres in the Colleges of Education, where well-trained guidance counsellors/psychologists with adequate knowledge of the application of psychotherapy such as cognitive restructuring and assertiveness training techniques. Also, students should be encouraged to seek psychological assistance whenever the need arises irrespective of their gender or study habits.

Contributions to knowledge

The outcomes of this present study have contributed to the efficacy of cognitive restructuring and assertiveness training in dealing with irrational fears and phobia related to examination situations. Also, the study established that individually, cognitive restructuring technique and assertiveness training can be adopted in dealing with examination phobia as experienced by any students and this is not influenced by gender and study habits of the students.

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