EFFECTIVENESS OF COGNITIVE AND GROUP BEHAVIOUR THERAPIES IN MANAGING EXAMINATION ANXIETY AMONG ACADEMICALLY-AT-RISK SECONDARY SCHOOL STUDENTS IN IBADAN, OYO STATE, NIGERIA

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ABSTRACT

This study investigated the effectiveness of Cognitive and Group Behaviour Therapies in managing examination anxiety among academically-at-risk secondary school students in Ibadan, Oyo State, Nigeria. The study adopted an experimental research design. 180 participants from six secondary schools in three local government areas in Ibadan. The participants were randomly assigned to treatment and control groups. The two treatment groups were exposed to ten weeks training in Cognitive and Group Behaviour Therapies, while participants in the control group received no training. Two validated instruments: Examination Anxiety Scale and Student Academic Self-Efficacy Scale were used. Data were analyzed using Analysis of Covariance and t-test. The findings revealed that there was a significant main effect of treatment on the ability of academically-at-risk-students to manage examination anxiety. Also, self-efficacy was found to have a significant effect on the examination anxiety of academically-at-risk-student participants. It was concluded that cognitive behaviour and Group therapies were effective in managing examination anxiety among academically-at-risk-students. Therefore, it was recommended among others that the school counseling psychologists can adopt the two interventions therapies to manage examination anxiety among academically-at-risk-students.
Keywords: Cognitive-Behaviour-therapy, Group-therapy, Examination-anxiety and academically-at-risk-student.

INTRODUCTION

Examination anxiety seems like a benign problem to some people, but it can be potentially serious when it leads to high levels of distress and academic failure in otherwise capable students (Wachelka and Katz, 1999). Thus, examination anxiety serves as stress, tension and strain that interfere with the proper functioning of an individual's body and mind. It is accompanied by feeling of helplessness because the anxious person feels blocked, unable to find a solution to his problem. In line with this assertion, Tobias (1993) contends that examination anxiety is a feeling of tension that interfere with academic situations and can cause an individual to lose self-confidence. In congruence, Hill and Wigfield (1984) found that anxiety and achievement share significant variance. Also, studies by Maehr and Midgley (1991), Pintrich and Schrauben (1992) have discovered that high test-anxious students functioned poorly and are often frustrated when expected to achieve, but low-anxious

students performed well (Hembree, 1988). These suggest that academically-at risk-secondary school students due to poor performance might experience strain and stress that could be harmful to their mental health. Corroborating this assertion, Adeyoju (1989) opined that when individuals experience failure at a task, they often become discouraged and may want to give up. This is commonly expressed in the behaviour of academically-at-risk-secondary school students experiencing academic failure in Nigerian secondary schools. Despite this development, not much attention is given to the needs of asademiccally-at-risk-students in Nigerian secondary schools and the rate at which they have failed their examinations is alarming. For example, only 39.51% of those who took the West African School Certificate Examination (WASCE) in 1981/82 passed five subjects and above? In 1982/83 only 33.79% passed five subjects and above. This reflects further deterioration in student's performance. The rate of failure in 1984/85 was recorded as the worst results in the 46-years history of West Africa Examination Council (WAEC) examinations as only 29.9% of those who sat for the West African School Certificate Examinations (WASCE) passed five subjects and above (Adeyoju, 1989).

This disturbing occurrence 22 years ago is further corroborated by the awful performance of students in the WAEC Senior School Certificate Examination results of the May/June 2010. Of the total number of 1,351,557 candidates who wrote the examination, only 337,071 candidates, representing 24.94% obtained credits in English Language, Mathematics and at least three other subjects (WAEC, 2010). Also, NECO 2010 recorded performance showed that out of 1,132,357 candidates that sat for the examination, only 283,089 candidates, amounting to 25% passed with five credits including English language and Mathematics (NECO, 2010). This implies that more than 70% of Nigerian secondary school students are at-risk of not gaining admission into any Nigerian university based on their inability to meet admission requirements. The possible cause of this disturbing phenomenon that is placing secondary school students at academic-risk of being incapacitated to go further in their educational pursuit have been attributed among other factors to the problem of examination anxiety and lack of academic achievement motivation (Hill and Wigfield, 1984).

In this context, Beken, Williams, Combs and Slate (2009) have posited that the term at-risk has become a catchall phrase to describe students who experienced or who are predicted to experience failure during their schooling years. In addition, Ender and Wilkie (2000) state that these students are likely to display a number of other characteristics such as low academic self-concept, unrealistic grade and career expectations, unfocused career objectives, extrinsic motivation, external locus of control, low self-efficacy, inadequate study skills for college success, a belief that learning is memorizing, and a history of passive learning.

In view of this, Ender and Wilkie (2000) advocate the inclusion of remedial courses for basic reading, writing and mathematics skills in their programming suggestions for academically-at-risk-students. Similarly, Hirokawa, Akihiro and

Miyata (2008) in their study conducted in Japan, examined the effects of anxiety-management programme for college students of social work on their perception of associated mental stress to examination taking and anxiety coping strategies. Students in the anxiety management group received progressive muscle training, cognitive-behaviour skill training and assertion training for 14weeks. Their life events, anxiety symptoms and stress-coping skills (active and passive coping skills), evaluated on the first and last days of the programme were compared with those of the control group. Their reported results indicated that the passive coping skills of students in the anxiety management group decreased after the programme.

Likewise, Yalom and Leszcz (2005) found that group psychotherapy help in solving the difficulties faced by individuals and equally encourage their personal development in manners that could enhance self-rediscovery, self-adjustment, self-confidence and belief in their ability, potentials and capability to face and overcome challenges successfully. Estrom (1996) reports that psychologists and educationists are becoming aware of the fact that an individual self-efficacy, or the perception of their capability or ability is intimately related to how they learn and behave. Based on this perspective, Adeyemo (2007) averred that when students have strong beliefs in their capabilities to undertake academic tasks, they will set a comparable goal and set necessary machinery in motion for actualizing these goals. Thus, studies on perceived academic self-efficacy and student learning have confirmed that perceived self-efficacy impacts on students' aspiration, level of interest in academic pursuit, academic accomplishment and how well they prepare themselves for different occupational careers (Bandura, 1995).

Consequently, it is of note that academically-at-risk-secondary school students perceive themselves as academic failures and as such, often develop a syndrome that includes a variety of self-defeating motives. Hence, academically-at-risk-secondary schools students in Nigeria are often overwhelmed by the feelings of inadequacy and distress when they are faced with the new demands of their studies and once they lose confidence in their abilities, it becomes easy for them to give up, be withdrawn, develop irrational doubt, inferiority complex, deviant behaviour, act of truancy, express negative self-statements, experience hopelessness and helplessness, resulting in poor academic performance. Based on this context, this study aimed at investigating the effectiveness of cognitive behaviour and group behaviour therapies in managing examination anxiety among academically-at-risk secondary school students in Ibadan, while considering the moderating effect of self-efficacy and gender. In this study the following hypotheses were formulated in null forms.

Ho_1: There is no significant effect of treatment on examination anxiety scores of academically-at-risk-students.

Ho_2: There is no significant effect of self-efficacy on examination anxiety scores of academically-at-risk-students.

Ho₃: There is no significant effect of gender on examination anxiety scores of academically-at-risk-students.

Ho₄: There is no significant interaction effect of treatment, self-efficacy and gender on examination anxiety scores of academically-at-risk-students.

METHODOLOGY

This experimentation used a 3x2x2 factorial matrix design. The variables considered are psychological treatment which exists at three levels (cognitive behaviour therapy, group behaviour therapy and control group); self-efficacy (high and low) and gender (male and female). The participants for this study were one hundred and eighty senior secondary school students three on the verge of writing their senior secondary school certificate examination (SSSCE) who are experiencing academic failure as expressed in their recorded performance of below 40% in three core subjects of English, Mathematics and Biology consistently in two terms examinations 1st and 2nd terms in their cognitive cumulative record folder in Ibadan, Oyo State Nigeria. Participants were purposively selected based on their performance of below 40% in English, Mathematics and Biology from six randomly selected co-educational public secondary schools in three randomly selected local government areas from among the eleven local government areas in Ibadan Oyo State on equal basis of 30 from these secondary schools in the state.

Examination anxiety was measured using the Sokan Examination Anxiety Scale. The SEAS is an 18-item instrument measuring examination anxiety expressed with statements concerned with ones feelings towards examination. A high index of score suggests anxiety disorder while a low index suggests the reverse. The reliability coefficient for Sokan Examination Anxiety Scale is 0.73 while the split-half reliability coefficient is 0.68. The test items were constructed in simple language thereby ensuring its face validity (Sokan, 1998). Academic Self-Efficacy was measured using an adopted and modified version of the Morgan-Jinks student academic self-efficacy scale developed by Morgan and Jinks (1999). The adopted and modified instrument contains 30 items validated through a pilot study. The reliability was established by using test-retest methods. The internal consistency reliability measured using Cronbach's alpha was 0.79. The original instrument is a thirty-item scale and had an overall reliability coefficient of 0.82. The instrument has a response format ranging from 'really agree (1) to really disagree (4).

The researchers got permission to carry out this research from the principals of the sampled secondary schools used for the study. Preliminary visits were made to the six secondary schools. And through this visits, the researcher informed the class teachers of the purpose of the study and liaised with them to get the needed information from the student's cognitive cumulative record folder as to facilitate effectively the process of purposive sampling of academically-at-risk-student who consistently scored below 40% in English, Mathematics and Biology in 1st and 2nd terms examinations for the purpose of the study.

Similarly, the initial visit to the schools was used as a pilot study. The six schools were selected using the box random sampling technique. Four of these schools were used as the treatment groups while two served as the control groups. The treatment groups received ten weeks training while the control groups received no training. The groups were subjected to pre-treatment and post treatment sessions. The training was conducted during the participant's extra-curricular activities period. The study was completed within a school term so as to avoid time lag effects on the study.

Summary of Treatment Package

Experimental Group One: Cognitive Behaviour Therapy

Session One: General orientation and administration of instrument to obtain pre-test scores. Introductory talk (Creative Simulation)

Session Two: Identification of psychological responsiveness in individual participants.

Session Three: Identification of unrealistic beliefs

Session Four: Turning failure to success

Session Five: Self-determination: a means to succeed

Session Six: Behaviour Modification

Session Seven: Good study habit

Session Eight: Self-Confidence

Session Nine: Need for Academic Focus

Session Ten: Revision of all activities in the previous session and administration of instrument for post treatment measures.

Experimental Group Two: Group Behaviour Therapy

Session One: Orientation and Administration of Pre-test measures Introductory talk (Importance of Education).

Session Two: Effect of Academic failure on Students

Session Three: How to overcome academic failure

Session Four: Examination anxiety

Session Five: How to manage examination anxiety

Session Six: How to improve achievement motivation

Session Seven: Goal Setting

Session Eight: Time Management

Session Nine: Behaviour Modification

Session Ten: Revision of all activities in the previous session and administration of instrument for post treatment measures.

The following statistical designs were used in this study, Descriptive statistics (mean, standard deviation), and variance (t-test). To test the hypotheses, Analysis of Covariance (ANCOVA) was employed to analyse the post test scores of participants on examination anxiety, using the pre-test scores as covariates to find out if post experimental differences were significant. The results obtained were tested at 0.05 significant levels and presented on tables.

RESULTS AND DISCUSSION

Table 1: A 3x2x2 Factorial Matrix Design for the treatment of Examination Anxiety and Achievement Motivation of Academically-At-Risk-Secondary School Students.

Treatment	Self-Efficacy				
	Male		**Female**		
	High S/E	**Low S/E**	**High S/E**	**Low S/E**	**Total**
A1 Cognitive Behaviour Therapy	A1 B1n=27	A1 C1n=5	A1 B2n=22	A1C2n=6	60
A2 Group Therapy	A2 B1n=29	A2 C1n=2	A2 B2n=27	A2 C2n=2	60
A3 Control Group	A3 B1n=6	A3 C1n=29	A3 B2n=2	A3 C2n=23	60
Total	62	36	51	31	180

The participants for this study consisted of one hundred and eighty Senior Secondary School Three (SSS3) students (98 boys) constituting 54.4% and (82 girls) constituting 45.6%. The age of the participants ranges between 13 and 20 years. The mean and standard deviation of their ages were 16.5 and 15 years respectively.

Table 2: Summary of Analysis of Covariance (ANCOVA) of pre-post tests interactive effects of examination anxiety scores of academically at-risk-students in the Treatment Groups, Self-Efficacy and Gender

Source	Sum of Sq	DF	Mean Sq	F	Sig.	Remark
Covariates	2182.919	1	2182.919	96.871	.000	
Main effects	3355.252	4	838.813	37.224	.000	
Treatment Groups	3234.536	2	1617.268	71.769	.000	Sig.
Self-Efficacy	110.970	1	110.970	4.925	.028	Sig.
Gender	9.746	1	9.746	.432	.512	n.a.
Trt Groups x Self-Efficacy x						
Gender	47.388	2	23.694	1.051	.352	n.s.
Explained	5746.342	12	478.862	21.250	.000	
Residual	3763.235	167	22.534			
Total	9509.578	179	53.126			

The results presented on table 2 show that there is significant effect of treatment in the pre-test; post-post Examination Anxiety Scores of academically-at-risk-students in the experimental and control groups. This means that there is a significant difference in the mean post-test examination anxiety scores of participants exposed to treatment and the control group. This implies that academically-at-risk-students in the experimental groups benefited from the treatment package.

Table 3: Multiple Classification Analysis (MCA) showing the direction of the results in the pre-post Examination Anxiety Scores of Academically at-risk-Students in the Treatment Groups, Self-Efficacy and Gender

V + C G.M= 25.59	N	Unad V	AMS	Eta	AI + CovDev.	Beta
Treatment Groups:						
Cognitive Behaviour	60	-4.44	21.15		-3.84	
Group Behaviour	60	-3.07	22.52		-3.25	
Control	60	7.51	33.10		7.09	

	N	Unad V	AMS	AI + CovDev		
Gender:					.73	.69
Male	98	.46	26.05	-.74		
Female	82	.55	26.14	.88		
Self-Efficacy:					.07	.11
Low	67	.462	26.05	-.45		
High	11	-2.74	22.85	.27		
	3				.49	
Multiple R-squared						.582
Multiple R						.763

V + C = GM is Variable + Category = Grand Mean; Unad V = Unadjusted Variation; AMS = Adjusted Mean Score; AI + CovDev. = Adjusted Independet + Covariates Deviation

The MCA as observed on table 3 showed the performance of all the groups in Examination Anxiety. The Control group had the highest adjusted post-test mean score followed by Group Behaviour Therapy with the adjusted mean score while the Cognitive Behaviour Therapy group had the least adjusted posttest mean score. Therefore, the result indicates that the impact of examination anxiety is much more on participants in the control group followed by Group Behaviour Therapy and Cognitive Behaviour Therapy groups respectively. It further reveals the differential-values of the pre and post treatment outcome and equally showed the effectiveness of the treatment package over the control (that is, non-treatment group). These values were obtained by adding the grand mean with the respective adjusted deviation. The table also indicates that treatment accounted for as much as 58% ($MR^2 = 0.58$) of the variance of the participants Examination Anxiety scores while the remaining 42% are due to other unexpected sampling errors.

Table 3 further shows that there is significant difference in the main effect of self-efficacy in the pre-post Examination Anxiety Scores of academically-at-risk-students between Low and High Self-Efficacy. This implies that based on the effect of the treatment, the high self-efficacy group expressed more confidence in their ability and capability to manage their examination anxiety challenges and thus, express low anxiety than the low self-efficacy group. The MCA table 3 shows that the mean score for the Low Self-Efficacy group is 26.05 while that of the High Self-Efficacy group is 22.85. This shows that the Low Self-Efficacy group had a higher mean score and by implication expressed high examination anxiety than the high Self-Efficacy group. This is attained by adding the grand mean to the unadjusted variation figure of high and low self-efficacy.

Table 3 shows that there is no significant difference in the main effect of gender in the pre-post Examination Anxiety Scores of academically-at-risk-students between male and female respondents. The MCA shows that the mean score for male is 26.05 while that of female is 26.14. This shows that the impact of gender on the reaction to anxiety by academically-at-risk-students is not significant. This is attained by adding the grand mean to the unadjusted variation figure of male and female academically-at-risk-students participants. In 1-way analysis, both the Treatment Groups and Self-Efficacy are significant but gender was not significant. In the 2-way interaction, there is no significant interactive effect in the interactions

between treatment, self-efficacy and gender. Also, in the 3-way interactions, no significant interaction is found. This implies that the impact of the interaction of treatment, self-efficacy and gender on the examination anxiety scores of academically-at-risk-students participants is not significant.

The result of the findings of hypothesis one revealed that there is significant effect of treatment in the post-test Examination Anxiety Scores of academically-at-risk-students in the experimental and control groups. This implies that the two therapeutic techniques proved to be effective in managing examination anxiety among academically-at-risk-secondary-school students. The reason for this could be that the students having been exposed to psychological measures that could help them self manage anxiety caused by the feelings of examination, they were able to be more focused in studying, determined, confidence, relaxed, coordinated and motivated to succeed. The result confirmed the reported findings of Hirokawa, Akihiro, and Miyata (2004) that cognitive-behaviour skill training and assertion training were effective in managing student's mental stress to examination taking and anxiety among college students in Japan after 14weeks training.

The result of hypothesis two reveals that there is significant difference in the effect of self-efficacy in the post-test Examination Anxiety Scores of academically-at-risk-students between High and Low Self-Efficacy. This implies that self-efficacy had significant effect in the examination anxiety scores difference between high and low self-efficacy of academically-at-risk-students participants for the intervention programme. The reason for this could be that due to the intervention, the students develop confidence in their ability to succeed in their academic challenges. This is in support of Adeyemo (2007) assertion that when students have strong beliefs in their capabilities to undertake academic tasks, they will set a comparable goal and set necessary machinery in motion for actualizing these goals.

Also, the result of hypothesis three shows that there is no significant difference in the effect of gender in the post-test Examination Anxiety Scores of academically-at-risk-students between male and female participants. This implies that the issue of gender identity did not influence the examination anxiety scores of participants. This development could be premised on the fact that since academically-at-risk-students share same or similar academic characteristics which resultant effect is poor academic performance, they could possibly express examination anxiety in likewise manner considering the fact that test anxiety is an uneasiness or apprehension experienced before, during, or after an examination because of concern, worry, or fear. Maehr and Midgley (1991); Pintrich and Schrauben (1992) assert that high test-anxious students (either boys or girls) functioned poorly and are often frustrated when expected to achieve, but low-anxious students performed well (Hembree, 1988).

The result of hypothesis four equally shows that there is no significant interactive effect in the interactions between treatment, self-efficacy and gender of the posttest examination anxiety scores of academically at-risk-Students. This suggests that self-efficacy and gender did not influence the treatment. However, the likely reason why

treatment, self-efficacy and gender did not interactively have significant influence on examination anxiety scores of academically-at-risk-students can be adjourned to the fact that they all exhibit similar characteristics nature of confusion, dismay and same feelings of helplessness as they find it difficult to seek solution to their problems. In line with this assertion, Tobias (1993) contended that anxiety is a feeling of tension that interfere with the solving of problems in a wide variety of ordinary life and academic situations and can cause examination anxiety leading one to forget and lose one's self-confidence. And these are the characteristic nature of academically-at-risk-students.

CONCLUSION

This study has several implications which include among others the fact that the study have proved that cognitive behaviour and group behaviour therapies are effective intervention techniques in managing examination anxiety among academically-at-risk-secondary school students. Since the two therapeutic techniques applied were effective, the skills learnt would enable academically-at-risk-secondary school students develop confidence in them, belief in their ability to succeed, develop positive attitude to school and learning, reduce their anxiety and improve on their academic achievement. Examination anxiety can be managed and the academic attainment of academically-at-risk-students improved through the effective utilization of cognitive behaviour and group behaviour therapies. In the light of this perspective, the family, society and significant others should take time to appreciate and understand the academic and developmental challenges faced and experienced by academically-at-risk-secondary-school students as to device appropriate measures to help them overcome their academic challenges. However, the school counseling psychologists can adopt the two interventions therapies to manage examination anxiety among academically-at-risk-students.

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