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EFFECTIVE INTERVENTIONS OF SELF-EFFICACY TRAINING IN THE REDUCTION OF TEST ANXIETY OF STUDENT NURSES IN OGBOMOSO NORTH LOCAL GOVERNMENT, OYO STATE, NIGERIA

By

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ABSTRACT

This study investigated the effectiveness of self-efficacy training in reducing test anxiety among student nurses. Fifty-one final year students of school of Nursing Ogbomoso, Oyo State, Nigeria were used for the study. The research adopted the 2x2 quasi experimental design and the major instruments used for the study were Sarason Text Anxiety Scale and the usual class achievement tests. The data were analyzed with the aid of Analysis of Variance (ANOVA). The findings indicate that the participants exposed to self-efficacy training showed a significant improvement in their academic performance than those in control group. Also, it was found that test anxiety when not properly managed has a significant negative effect on academic performance of students and that there are interactions effects between test anxiety and self-efficacy on the academic performance of the participant. It is recommended that self-efficacy strategies should be used for the treatment of test anxiety either for diminishing the crippling effects of test anxiety or to teach students how to utilize the anxiety to their advantage.

Key Words: *Self-efficacy, test anxiety, student nurses*

INTRODUCTION

The period of examination at all levels of academic institution is always a period of solemnity and sobriety for every student. It is the time when students are found "married" to their books, libraries are filled to the point of no space, and majority of social activities are abandoned till the end of the examination. In a nutshell, students are found with some levels of anxiety to pass their examinations. This action is normal because a level of anxiety is needed by each student to pass his/her examination. However, many students are fond of manifesting excessive degree of anxiety, which in turn hinder their level of academic performance. Test anxiety is the uneasiness or apprehension that a student feels before, during or after a test because of worry or fear of failure. Everyone experiences anxiety from time to time; in fact, low levels of anxiety can motivate students to study and perform well. However, when anxiety interferes with test-taking and learning it can cause students to 'blank out' or have trouble paying attention, limiting their ability to think clearly and do their best work.

Crooks and Stein (1988) define anxiety as feelings of apprehension and nervousness accompanied by the activation of the Sympathetic Nervous System (SNS). Test anxiety is anxiety that originates from the appraisal of being tested as threatening (Zeidner, 1998). In the modern day context of high-stakes testing, it has become

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increasingly important to understand the relationship between test anxiety and test performance (e.g., Cizek& Burg, 2006; van der Embse & Hasson, 2012; Weems, Scott, Taylor, Cannon, Romano, Perry, et al., 2010). Plotnik and Mollenauer (1978) cited in Ritter (2004) explain the way anxiety manifest itself on human being "with the activation of the S. N. S., comes a torrent of physiological changes to the body, heart rate increases, blood pressure increases, respiration increases and blood is divert away from the extremities toward the internal organs". However, while relating anxiety to the test taking behaviour of individuals, Probert (2003) definestest anxiety as an uneasiness or apprehension before, during or after an examination because of concern, worry or fear. The degree of test anxiety ranges from mid to severe, affecting each person differently (University of St. Thomas, Minnesota U.S.A. 2002). For instance "many students can manage these distress signals by labeling them as "nerves" or a "prerequisite to outstanding academic performance. Some students however, have such a difficult time dealing with test anxiety that may change their major or withdraw from college altogether" (The Counselling Center for Human Development U.S.F, 2002).

Test anxiety is a serious problem for many student populations. Test anxiety among students has been negatively associated with test performance, achievement of degrees and selection of occupation (Topp, 1989). Students at all levels who suffer from test anxiety choose and pursue career which involve infrequent evaluations and which consequently, may not fully challenge their cognitive abilities (Krohne&Laux, 1982)

The term 'test anxiety' as a scientific construct, refers to the set of phenomenological, physiological and behavioural responses that accompany concern about possible negative consequences or failure of an examination or a similar evaluative situation (Sieber, O'Neil & Tobias, 1977). A particular low response threshold for anxiety in evaluative situation characterizes test anxious students. As a result, they tend to react with threat perceptions, reduced feelings of self-efficacy, self-derogatory conditions; anticipatory failure attributions and more intense emotional reactions and arousals at the very first sign of failure. Test anxious behaviour is typically evoked when a person believes that his or her intellectual, motivational and social capabilities are affected by the test situation (Sarason&Sarason, 1990). In test anxiety literature, Spielberger's (1972) cited in Ergene (2003) test anxiety definition is widely accepted (test anxiety is an unpleasant state characterized by feelings of tension and apprehension, worrisome thoughts and the activation of the autonomic nervous system when an individual faces evaluative achievement-demanding situations). Test anxiety is a significant issue for counselling as evidenced by its rapid growing literature.

It is unusual for learners to experience a severe test anxiety at the initial stage of their learning. However, "it usually rear its ugly head towards the end of High school and is most commonly seen in colleges" (Williams, 2003). He further submits that college students suffering from anxiety have the added pressure of graduating from college and finding job. Statistically, University of St. Thomas, Minnesota U.S.A. (2002) stated that test anxiety affects more than 25 percent of all the college students at some time during their college career. Unfortunately, students undergoing test phobia are usually above average intelligence and ability, but their test scores do not accurately reflect their ability.

A number of reasons could be attributed to being test anxious, such as prior negative experience with test taking that serves as the activating event, lack of adequate preparation for the test, poor time management, poor study habits, lack of organization, lack of confidence and worry about past performance on examinations, how friends and other students are doing, negative consequences of failure and loss of esteem.

Consequently, a test-anxious student develops the following characteristics "viewing the situation (i.e. test) as difficult, overwhelming and threatening, seeing oneself as ineffective or focusing the undesirable consequences of personal inadequacies; expecting and anticipating failure and loss of regard by others" (Counseling Center for Human Development; USF (2002.). Villanova University Counseling Center (2004) sees such a student as having the following problems:

- Difficulty in remembering or blanking out on well-known material.
- Difficulty in understanding what the examination is asking.
- Difficulty in concentrating and choosing the right approach to a problem.
- Committing too quickly to the wrong solution.
- Worrying about running out of time or that others are finishing.
- Watching the clock or being distracted by what others are doing.
- Angry at self, with other students or the instructor.

Other physical and mental distress include, sweaty palms, perspiration, headache, stomach upset, anger, depression, nausea, panic, rapid heartbeat, tense muscles, head-chest-back pain, sleeplessness as well as yawning.

Many therapeutic devices have been suggested for mastering self-regulation to diminish the effects of stress and anxiety. Chiefly among these strategies are: progressive musclerelaxation. Electromyogram (EMG) biofeedback training, finger temperature, biofeedback training and authogenic training (Leheres, Carr, Sargunaraj & Woolfolk, 1994, and Ritter, 2004). However, the goal of this research work is to see if Albert Bandura's Self-efficacy strategies can be adapted for the treatment of test anxiety.

Self-efficacy being propounded by Albert Bandura is defined as one's self judgments of personal capabilities to initiate and successfully perform specified tasks at designated levels, expend greater efforts and persevere in the face of adversity (Bandura, 1977). Relating the construct to academics, Bandura (1986) explained that students' beliefs about their capabilities successfully perform academic tasks, their self-efficacy beliefs powerfully influence how they perform in academic endeavours. Due to the fact that people behave in accordance with what they believe, rather than in accordance with their actual capabilities, it is individual beliefs about their capabilities, rather than their actual capabilities that accurately predict performance, attainments (Salami & Ogundokun, 2009; Valiante, 2004). Pajare and Valiante (1999) also asserted "students' self-efficacy beliefs act as a mediating mechanism of personal agency, mediating between other determinants of competence (e.g. skill, ability or previous accomplishments) and their subsequent performances.

The development of self-efficacy belief arises from the acquirement of four principal information sources (Phan & Walker. 2000). Self-efficacy beliefs are informed by individual's prior experiences in the form of interpreted success and failure; verbal and social persuasions in the form of praise, criticism and attribution feedback; vicarious experiences in the form of watching others succeed and fail; and physiological indicators(Valiante, 2004). Relating anxiety to self-efficacy, Betz & Hackett (1998) have the following to say: Anxiety is viewed by Bandura as a "coeffect" of self-efficacy expectations in that the level of anxiety is seen to covary inversely with the level and strength of self-efficacy expectations; as self-efficacy expectation increased, anxiety should decrease and vice versa. Thus, interventions focused on

increasing self-efficacy expectations via attention to the sources of efficacy information should increase approach versus avoidant behaviour and, concurrently, decrease anxiety in relationship to the behaviour.

To ascertain achievement of the said objective of this study, that is, using the self-efficacy strategies to reduce the test anxiety of the college students, the study is designed to address the following hypotheses.

Hypotheses
(i) There is no significant difference in the academic performance of students' treated and non-treated with self-efficacy training.
(ii) There is no significant effect of test anxiety on the academic performance of students treated with self-efficacy training and control group.
(iii)There is no significant interaction effect of anxiety and treatment on academic performance of students treated with self-efficacy training and control group.

METHODOLOGY
Research Design
The research adopted a 2 x 2 experimental design.
Participants
Fifty-one final year students of school of Nursing (SON), Baptist Medical Centre, Ogbomoso, Oyo State were randomly selected and screened for the study. Their age range between 16 and 25 years, 6 (11.9%) were aged between 16 and 20years, 43 (84.3%) were aged between 21 and 25years while 2 (3.9%) of the participants did not specify their age. Their mean age was 22.4 years and standard deviation of 2.45 while 7 (13%) of them were males while the rest 44 (87%) were females.

Instrumentation
Demographic information were collected from participants regarding their age, gender, and religion. Spielberger's Test Anxiety Inventory (1980) was used to screen the participants to fish out the test anxious studentsfor the study. The scale has 30 items of true or false response. Examples of such items include: while taking an important examination, I find myself thinking of how much brighter the other students are than I am; if I were to take an intelligence test, I would worry a great deal before taking it. For the scoring, the total number of a true participant answers is his/her test anxiety score. A score of 10 or below ranks in the low test anxiety range. A score of 10 - 16 ranks in the medium range while any score above 16 signifies high-test anxiety. The test-retest of the instrument was done after three weeks and the reliability coefficient was found to be 0.84.

Test Anxiety Scale (TAS) by Sarason (1984) was used to collect data from the participants and the School records was used as achievement tests.

TASwas adapted fromSarason(1984) to measure test anxiety of the participants. The instrument was placed on a 4-point Likert-type scale ranging from Not typical = 1 to Very typical = 4. The reported reliability coefficient of the scale after three weeks was found to be .84.

Achievement Tests: Two of the students' Continuous Assessment (C A) were collected as pretest and posttest treatment. The pretest was one of the CA's, they have done before the treatment and the second test (posttest) was done a week after the treatment. The two tests were conducted by the same teacher and on the same subject. Twenty (20) marks were, accorded to each test.

RESEARCH PROCEDURE

The study was carried out over a period of seven weeks. There were two phases: the recruitment and the training phases.

The recruitment exercise started with the obtaining permission to carry out the research from the principal of the school as part of the ethical approval. The principal later handed the matter over to the officer in charge of research. It was this officer who helped the researchers to administer the questionnaire (Test Anxiety Scale). All the copies of the questionnaire were properly filled and returned. When the scale was scored, 8 (15%) of the participants experienced low test anxiety (score 10 and below), 23 (46%) of then are ranked on the medium range (scored between 11 and 16) while 20 (39%) of the participants scored 16 and above which is a symptom of high test anxiety However 2 of the participants ranked a low test anxious showed interest in attending the training exercise, 6 of the medium tested anxious ones signifies interest while 13 of those that were highly tested anxious registered to attend Consequently, with 21 participant showing interest in the training exercise the researchers were contented in flagging off the training exercise. The training exercise lasted seven weeks.

Week one was devoted to introduction and familiarization. Both the trainers and the trainees were able to know one another better. The participants were asked to share some the experiences they had had about test talking about how it had affected them and what measure (if any) they have taken to overcome it.

On the second week, Test anxiety: What is it? Its symptoms and causes were dealt with, with its consequences on the test anxious ones. The next two week weeks Third and Fourth weeks) witnessed proffering solutions to test anxiety. In week three, verbal and prior experiences were discussed as tools for solving test anxiety. They were reminded of how they were able to pass the Senior School Certificate Examination as well as their year one and two examination despite how difficult they seemed to be. They were persuaded that they could definitely pass their final examinations if they could only let their anxiety lead them to read appropriately. In the fourth week of the training, vicarious experience (the use of modeling) was used to reduce the level of participant's test anxiety. The fifth week was devoted to rounding off of the training section where the researchers encouraged the participants that their anxiety was not uncommon but they should summon courage to battle their examination with serious dedication to reading with good study habit.

The next week was dedicated to post-test in which their tutor gave them a test, which formed part of their continuous assessment. It should be noted that the participants were using the training to carry out a research. However, it was presented to them as a seminar to help them enhance their performance in their coming examination.

ANALYSIS OF DATA

In the data collected, self-efficacy strategies were treated as independent variable and the test anxiety scores were taken as dependent variables. Analysis of variance (ANOVA) statistical procedure was computed in order to address the hypothesis stated and tested at the 0.05 level of significance.

RESULTS

The result in the table 1 revealed the significant difference in the academic performance of students treated and non-treated with self-efficacy training (F $_{(1,500}$ = 44.781, p< 0.05).

The second hypothesis tested for the significant effect of test anxiety on the academic performance of students treated with self-efficacy training and the control

group also revealed that those who were exposed to training were significant on the main effect (F (2,50) = 4.451, p< 0.05).

.Hypothesis three, tested for the significant interaction effect of anxiety and treatment on academic performance of students treated with self-efficacy training, and control group the result showed a significant interactional effects of test anxiety and treatment on academic performance of student ($F_{(2,50)}$ = 4.652p <0.05).

Thus, all the hypotheses were confirmed not direction of the self-efficacy training of the students to their academic performances.

Table 1: Summary of a two-way analysis of variance showing relationship between anxiety and treatments on academic performance of students treated with self-efficacy

SOURCES VARIATION	SS	DF	MS	F	P
Main effect	253.298	3	84.433	17.894	.000
Anxiety (A)	42.000	2	21.000	4.451	.017
Treatment (B)	211.298	1	211.298	44.781	.000
Interaction (A & B)	43.900	2	21.950	4.652	.015
Explain	309.210	6	51.535	10.922	.000
Residual	207.613	44	4.718		
Total	**516.824**	**50**	**10.336**		

Source: Field Survey

DISCUSSION

The outcome of the findings generated from the experimental conditions revealed that the participants in the treatment condition showed a significant improvement in their academic performance after being exposed to self-efficacy training than those in control group. This signifies the effectiveness of self-efficacy strategies in the treatment of test-anxiety among students. It confirms the sayings of Bandura as cited in Pajare (2002) that "self-efficacy beliefs touch virtually every aspect of people's life" and that of Betz and Hackett (1998) that "self- efficacy had been used in the treatment of phobias, self-regulation of pain and academic performance".

It has also been notably found from the result that test anxiety when not properly managed has a significant negative effect on academic performance of students. The result is in consonance with prior studies (Campus, 2002; Williams, 2003; Ritter, 2004) who found that anxiety interferes with learning and test taking behaviour as well as performance and that the outcome of test anxiety is a direct result of either a failing grade or perhaps failing an examination. This implies that, students would perform creditably well when their anxiousness about test taking is reduced. Though a measured test anxiety is needed to awake the students to reading and preparation for examination, students who are over anxious about test taking, no matter how intelligent they are may not perform up to expectation unless their anxiety is reduced to the desired level.

Also, the research findings indicate that there are interaction effects between test anxiety and self-efficacy. This should not constitute a spark of surprise as Bandura, quoted by Betz and Hackett (1998) had already found that "anxiety is "co-efficient" of self- efficacy expectations in that the level of anxiety is seen in covary inversely with level and strength of self-efficacy expectation increased, anxiety should decrease and vice versa".

In conclusion, since self-efficacy training yields positive and effective results in the reduction of test-anxiety of students, and the learners could easily master it. The researcher therefore recommends its usage either for diminishing the crippling effects of test anxiety or to teach students how to utilize the anxiety to their advantage.

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