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The effects of anxiety management and study skills training on test anxiety in college students

Karen Carter-Harvey

THE EFFECTS OF ANXIETY MANAGEMENT

AND STUDY SKILLS TRAINING

ON TEST ANXIETY IN COLLEGE STUDENTS

BY

KAREN CARTER-HARVEY

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE

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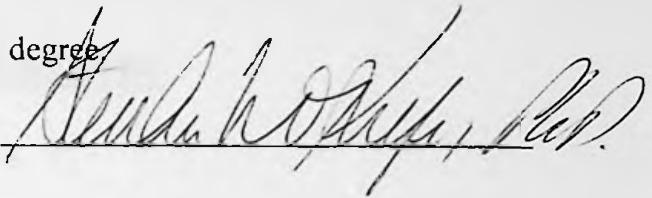
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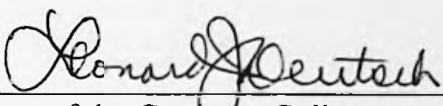
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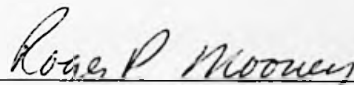
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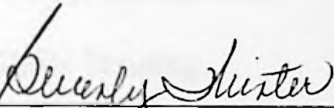
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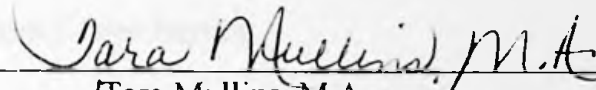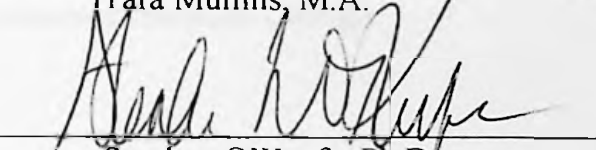
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Running Head: The Effects of Training

The Effects Of Anxiety Management

And Study Skills Training

On Test Anxiety In College Students

Karen Carter-Harvey

Marshall University Graduate College

Abstract

This study measured the effects of anxiety management and study skills training on test anxiety in college students. Twenty-one college students from two sections of Introductory Sociology were involved in the study. The Test Anxiety Inventory (TAI) and exam scores were used to evaluate the effectiveness of the training. Pre-test, post-test, and delayed post-test measures were obtained. The analysis of variance (ANOVA) indicated no significant difference on TAI scores or exam scores between the control and experimental groups. Recommendations for further research are given.

Acknowledgments

I would like to express my deepest and sincerest thanks to the members of my committee, especially Dr. Roger Mooney. Without his help, this project would not have been possible. He has proved to be a very encouraging and helpful professor throughout my years in graduate school. He expresses sincere concern for the students and is always willing to help.

I would also like to express my gratitude to Tara Mullins for giving up time in her busy schedule to serve on my committee. She has been a mentor and example since the completion of my undergraduate degree. She took me "under her wing" during the completion of my practicum for my Baccalaureate degree. Her support and friendship have meant a great deal to me over the years.

Additionally, I would like to thank Beverly Winter for agreeing at the last minute to serve on my committee in the absence of Dr. Paul Wiese. Mrs. Winter has been a mentor to me throughout graduate school. I took my first class from her and loved it. She really sparked my interest in the field of school psychology. She has always been so helpful in allowing me to borrow testing kits and anything else she thought might be helpful to the students.

My academic success would not have been possible without the support from family and friends. My parents have bestowed undying support throughout my academic career and taught me the value of an education. I would also like to

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Tables

The Effects of Anxiety Management and

Study Skills Training on Test Anxiety in College Students

Test anxiety is a prevalent problem that affects students in elementary school

through higher education (Birenbaum & Nasser, 1994). Test anxiety has been

associated with poor school performance, physical illness resulting from the

related stress, and low self-esteem (Austin, Partridge, Bitner, &Wadlington,

1995). This study focused on the effects of anxiety management training and

study skills training on test anxiety in college students. Many women and men

arrive at universities and colleges without the skills needed for effective study and

the methods for dealing with test anxiety (Newman, 1996).

Test anxiety as defined by Dusek (1980) is "an unpleasant feeling or emotional

state that has physiological and behavioral concomitants, and that is experienced

in formal testing or other evaluative situation" (p.88). Test anxiety has received

notorious attention as students are subjected to increasing amounts of tests and as

colleges and universities become more competitive. According to Suinn (as cited

in Wilson & Rotter, 1986), approximately 25% of college students have

experienced test anxiety that is of performance disabling proportions.

Liebert and Morris (1967) identified worry and emotionality as the two major

components of test anxiety. Worry is defined as the cognitive concern regarding

one's performance and consequences of failing (Spielberger, 1980). Emotionality

is defined as the self-perceived autonomic arousal evoked by testing or evaluation

cues.

Several models have been developed in an attempt to explain test anxiety.

The interference model of test anxiety stresses retrieval problems when in the test situation. The study-skills deficit model of test anxiety, on the other hand, emphasizes problems in encoding and organizing information (Naveh-Benjamin, 1991; Birenbaum & Nasser, 1994; Mealey & Host, 1992). Over the past two decades, the information processing model has evolved as a major model for test anxiety. The model suggests that two types of test-anxious students exist. The first type are those who possess effective study skills, sufficient knowledge of the material, and cognitive organizational skills, but fail to use these in the testing situation due to task-irrelevant responses. The second type of test anxious student are those who lack both the effective study skills and the cognitive organizational skills (Naveh-Benjamin, McKeachie, & Lin, 1987). The information processing model suggests that the first type of test-anxious student would benefit most from training aimed at reducing anxiety during the test situation itself, and that the second type of test-anxious student would benefit most from training aimed at improving encoding and organizing information (Naveh-Benjamin, 1991).

Since the theory of test anxiety was first introduced in the 1950's by Mandler and Sarason (Wilson & Rotter, 1986), three major treatment approaches have emerged. The first approach focuses on the physiological arousal brought on by test anxiety. Anxiety is seen as necessary for survival as it heeds warning of danger. Test anxiety, however, is a form of non-adaptive anxiety. Highly test anxious students report sweaty palms, increased heart rate, muscle tension, and shortness of breath (Nicaise, 1995).

Beginning with Wolpe's (as cited in Nicaise, 1995) systematic desensitization,

behavioral psychologists have attempted to reduce the autonomic arousal in test anxious students. Applied relaxation training emerged as a modification of systematic desensitization. Another treatment developed out of this prospective is Anxiety Management Training (AMT). Developed by Suinn and Richardson (1971), AMT is aimed at helping individuals believe that they can control their own anxiety (Nicaise, 1995). This short-term therapy uses "anxiety arousal to train the client to use relaxation as a coping skill to eliminate the arousal state" (Suinn, 1995, p.289). The individual is trained in muscle relaxation techniques and deep breathing (Nicaise, 1995). Imagery is used to arouse anxiety and homework assignments add a practice component in order to help the individual generalize the training to real life situations (Suinn, 1995). The individual practices by imagining anxiety-provoking situations and then using the techniques of AMT to achieve a relaxed state. These approaches have been helpful in reducing test anxiety as reported by the student, but have shown no significant effects on improving test performance (Nicaise 1995).

The second treatment approach involves training individuals in study skills and test-taking strategies. "According to this model, test anxiety does not cause poor performance, but the awareness the individual has of poor past performance causes test anxiety" (Nicaise, 1995, p. 71). The goal of this approach is to enhance study behaviors, knowledge of the material, and train test-taking strategies; areas where the individual may demonstrate deficiencies. Several studies have indicated that this method of treatment has shown significant effects on improving test performance (Nicaise, 1995).

The third treatment approach involves cognitive attentional treatment. This treatment model suggests that "test-anxious individuals spend most of their time with self-preoccupied ruminations and dwelling on negative cognitive feedback" (Nicaise, 1995, p. 73). In turn, these maladaptive thoughts prevent the individual from concentrating on the test, thus causing their performance to suffer (Nicaise, 1995).

Research suggests that a combination of a treatment intervention (i.e. AMT), coupled with study skills training is the most effective way to reduce test anxiety and improve test performance (Wilson & Rotter, 1986; Nicaise, 1995). The techniques could be taught at colleges through workshops. The purpose of this study was to measure the effects of anxiety management and study skills training on test anxiety in college students.

The hypotheses for this study were:

Null Hypothesis: Anxiety Management and Study Skills Training will have no significant effect on reducing test anxiety.

Hypothesis I: Anxiety Management and Study Skills Training will have a significant positive effect on reducing test anxiety.

Null Hypothesis: Anxiety Management and Study Skills Training will have no significant effect on exam scores.

Hypothesis II: Anxiety Management and Study Skills Training will have a significant positive effect on exam scores.

Method

Subjects

Subjects were selected from two introductory sociology classes at The College

of West Virginia located in Beckley, WV. Twenty students were involved in the

study. The College of West Virginia is a private, non-religiously affiliated, not-

for-profit institution. The College of West Virginia is a four-year degree granting

institution, which was established in 1933 as Beckley College.

Instrumentation

The Test Anxiety Inventory (TAI) is a 20-item self-report questionnaire

designed to measure two major components of test anxiety: worry and

emotionality. The inventory measures test anxiety as a situation-specific trait.

Examinees report the frequency of specific anxiety symptoms that they

experience when taking a test. The inventory can be given to high school and

college students. Two week test-retest reliability coefficients for graduate

students (N=31) was .80. Three week test-retest reliability coefficients for

college students (N=159) was .80. The Kuder-Richardson Formula 20 correlation

coefficients for internal consistency were .92 or greater. Patterns of correlations

of the TAI with six other anxiety measures suggests evidence of concurrent and

construct validity (Spielberger, 1980).

Procedure

The TAI was administered prior to the training and scores on the exam prior to

training were obtained from the instructor. One class was randomly chosen to

serve as the experimental group and the other class served as the control group.

The experimental group participated in anxiety management and study skills

training. The training involved group discussions, anxiety management

techniques, test preparation techniques, and test-taking strategies. There were two

training sessions. Post-test scores on the TAI immediately following the training

and test scores on the exam following training were obtained. Delayed post-test

scores were obtained three weeks after training had been completed .

Results

Analysis of Data

The research involved a between group quasi-experimental design. The

independent variable was anxiety management and study skills training. There

were two levels of the independent variable: anxiety management and study skills

training and no training. The dependent variable was TAI scores and exam

scores. The analysis involved interval data. The analysis of variance (ANOVA)

was utilized to test the statistical significance of the difference between means.

The ANOVA identifies the proportion of variance of the dependent variable that

the independent variable contributes and the proportion of total variance the error

variance contributes. Alpha was set at the .05 level. Both null hypotheses were

accepted. The results indicate no significant difference between TAI ($F = 1.623$,

$p \leq .05$) or exam scores ($F = 0.598$, $p \leq .05$) between the experimental and control

groups. The sum of squares, degrees of freedom, ,mean squares, and F-ratios are

shown in Table 1 (for TAI scores) and Table 2 (for exam scores). The

experimental and control group's pre-test TAI ($F = 1.820$, $p \leq .05$) and exam

scores ($F = 0.016$, $p \leq .05$) were not significantly different. The sum of squares,

degrees of freedom, mean squares, and F-ratio for pre-test scores are shown in

Tables 3 and 4.

TABLE 1

Analysis of Variance for TAI Scores Between Experimental and Control Groups

Source	Sum of Squares	df	Mean Square	F
Between	1295.283	5	259.057	1.623
Within	8621.700	54	159.661	
Total	9916.983	59		

$p \leq .05$.

TABLE 2

Analysis of Variance for Exam Scores Between Experimental and Control Groups

Source	Sum of Squares	df	Mean Square	F
Between	502.733	5	100.547	0.598
Within	9075.600	54	168.067	
Total	9578.333	59		

$p \leq .05$.

TABLE 3

Analysis of Variance for TAI Scores Between Experimental and Control Group Pre-Test Scores

Source	Sum of Squares	df	Mean Square	F
Between	288.800	1	288.800	1.820
Within	2856.000	18	158.667	
Total	3144.800	19		

$p \leq .05$.

TABLE 4

Analysis of Variance for Exam Scores Between Experimental and Control Group

Pre-Test Scores

Source	Sum of Squares	df	Mean Square	F
Between	3.200	1	3.200	0.016
Within	3580.000	18	198.889	
Total	3583.200	19		

p≤ .05.

TABLE 5

Mean TAI Scores for Experimental and Control Groups

Group	Pre	Post	Delayed Post
Experimental	35.600	37.600	33.000
Control	43.200	44.400	45.100

TABLE 6

Mean Exam Scores for Experimental and Control Groups

Group	Pre	Post	Delayed Post
Experimental	75.800	81.600	84.200
Control	76.600	79.800	81.000

Discussion

The null hypotheses were accepted; the alternative hypotheses were rejected. The results of the research indicated no significant differences between TAI scores for the experimental and control groups. Also, no significant differences were found between exam scores for the experimental and control groups.

Nicaise (1995) criticized research on study skills training for using analog measures. Subtests from IQ and achievement tests are analog measures often used in research. The analog measures fail to exert anxiety in students that regular testing measures would exert. Additionally, Nicaise criticized research on study skills for seeking subjects with poor study and testing skills, as well as poor time management techniques. The author suggested that not all test-anxious students have poor test-taking and study skills.

Naveh-Benjamin (1991) stated that test anxiety is manifested in several stages of the learning process; beginning with the initial learning of the information, next organizing the information, and ending with retrieval of the information during the exam situation. Some test-anxious students have deficits in all areas while others only have deficits in some areas. The results of this research suggest that different training programs may have been needed based on individual needs of the students. The present study grouped all subjects together in the anxiety management and study skills training. Further research should be conducted which identifies individual student needs prior to placing them in the appropriate training for their particular deficits.

Mealey (1990) stated that students should be taught effective study strategies, but that it is equally important that they understand when and how to use them. Additionally, Mealey noted that at-risk students must recognize their negative attitudes toward learning before they can change since motivation is a major factor in academic performance. The College of West Virginia (CWV) has an open-door policy, which allows acceptance of anyone with a high school diploma or GED. ACT or SAT scores are not required for acceptance. The author feels that the results of the study were limited by the lack of motivation found in the student population at CWV. Student motivation to attend college may be based on reasons other than striving for academic success including alternative to full-time employment, parental pressure, financial aid monies, etc. Counseling should be provided to students who apply for financial aid on the payment amounts when the student completes or drops out of school. Often students see financial aid as an immediate source of income without thinking of the implications for future payments and debt.

The study originally began with 32 in the control group and 34 in the experimental group. The number of subjects dropped to 10 in each group at the conclusion of the study. For students to be included in the results, they must have been present for all training sessions, all exams, and all TAI administrations for the experimental group and all TAI administrations and all exams for the control group. Students in the experimental group included in the results of the study may have lacked motivation for change or improvement in academic performance based upon informal conversation with the instructor.

The results of this study are inconsistent with the findings of Wilson and Rotter (1986). Wilson and Rotter found that anxiety management training significantly reduced test anxiety and improved self-esteem and test performance. The authors also found that study skills training affected levels of test anxiety and self-esteem.

Dendato and Diemer (1986) found that a combined treatment approach was more effective in treating test anxiety and improving academic performance. Cognitive/relaxation therapy alone was found to be effective in reducing anxiety but did not improve academic performance. Study-skills training alone did not have a significant effect on either anxiety levels or academic performance. Dendato and Diemer's combined treatment approach coupled cognitive/relaxation therapy with study-skills training.

The researcher would recommend further research include college students in public and private colleges and universities, where open admissions is not the policy. Studies that focus on students in upper-level courses may better address motivation. The student who has successfully progressed to higher-level courses may be more motivated to do well academically and more receptive to strategies designed to enhance academic performance. Training may need to only be offered to students who express motivation for change, given motivation is a key factor in academic success. If the student does not practice the techniques, they may not be prepared to apply the skills in the exam setting.

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Appendix A

Review of Literature

Introduction

"Test anxiety refers to the physiological, cognitive, and behavioral responses that arouse negative anticipation about evaluation and possible failure" (Nicaise, 1995, p. 67).

We live in a society where test performance in part determines the lives of people (i.e. college admission practices, licensing exams, etc.). While test anxiety may enhance performance in some students, more often it is disruptive and decreases performance (Wilson, Omeltschenko, & Yager, 1991). Test anxious students perceive exams or other evaluative situations as personally threatening and therefore respond with intense emotions. These situations also evoke self-derogatory worry responses and off-task thoughts leading to tendencies for error which interfere with the necessary task-relevant responses for academic achievement and success (Naveh-Benjamin, McKeachie, & Lin, 1987). In summary, test anxious students see themselves as ineffective or inadequate in an exam setting. The anxiety interferes with their ability to communicate what they know when in the test situation .

Test anxiety is a significant problem in both school age and college students (Birenbaum & Nasser, 1994). It has been associated with academic failure, low self-esteem, and physical ailments related to the stress which accompanies test anxiety (Austin, Partridge, Bitner, & Wadlington, 1995). Students high in test

anxiety receive lower grades and are more likely to be retained. The author also suggest that approximately 20% will drop out of school completely due to repeated failure in academics (Nicaise, 1995). The negative effect of test anxiety on academic performance is a well-documented phenomenon. It "has earned the reputation of being one of the most pervasive problems associated with student learning in institutions of higher education" (Schonwetter, 1995, p. 3). According to Wilson and Rotter (1986) approximately 25% of college students had experienced test anxiety of performance-debilitating proportions.

Components of Test Anxiety

Liebert and Morris (1967) conceptualized test anxiety as consisting of two components: worry and emotionality. Worry refers to the cognitive concerns regarding failure. Emotionality refers to the physiological and affective reactions evoked by evaluative stress (Wigfield & Eccles, 1990).

Worry tends to be elicited by internal or external cues related to the possibility of failure and whether one's ability is adequate to complete the task successfully. Emotionality tends to be elicited by the presence of testing cues. Worry is the component most strongly and consistently related to academic performance (Wigfield & Eccles, 1990).

Models of Development

    Two major models have been identified by researchers in an attempt to explain the development of test anxiety: the interference model and the deficit model. The interference model focuses on students who possess the proper organizational and study skills, however, test anxiety interferes with the students ability to recall information previously learned during the exam situation due to task-irrelevant cognitions. In contrast, the deficit model focuses on students who do not possess effective study skills or sufficient knowledge of the subject. These students do poorly during the exam situation and have problems retrieving the information because the information was never learned (Naveh-Benjamin, 1991). Birenbaum and Nasser (1994) suggest that the difference between the models is in the initial acquisition of knowledge stage.

    Some researchers suggest that the two models are complimentary rather than contradictory. The test-anxious student first has difficulty encoding the information and secondly, has difficulty in retrieving the information in the exam situation. This leads to less effective learning and poor test performance (Birenbaum & Nasser, 1994).

    Mealey and Host (1992) found that students may develop a sense of learned helplessness if they have failed or done poorly previously. These students develop a negative self-concept, which leads to irrelevant thoughts during the

exam. Although these students possess adequate study skills, distraction and anxiety leads to poor performance. In addition, students who are unaware that they do not possess effective study skills can also develop a sense of learned helplessness and test anxiety.

Naveh-Benjamin (1991) found that neither "model alone can cover the range of test-anxiety phenomena" (p. 138). There are different types of test-anxious students, each with their unique set of problems. Therefore, different types of test-anxious students could benefit from various types of training. For example, high test-anxious students with effective study and encoding skills would likely benefit most from training aimed at reducing anxiety during the test situation itself. High test-anxious students with poor study and encoding skills would likely benefit most from training aimed at learning and organizing the information. However, test anxiety manifests itself in a range of deficits including initial learning of the information, organization of the information, and retrieval of the information in the exam situation. Some test-anxious students have deficits in all three areas, while others may have difficulty in one area only.

Methods of Reduction

Several methods aimed at reducing test anxiety and increasing academic performance have emerged over the years. Wolpe's (as cited in Nicaise, 1995) systematic desensitization trained individuals in deep muscle relaxation and

visualizing anxiety-provoking situations while remaining calm and relaxed.

Individuals were then trained to visualize increasingly stressful events while

continuing to remain calm and relaxed. Goldfried and Trier (as cited in Nicaise,

1995) used a modified version of Wolpe's systematic desensitization to treat

public speaking anxiety. Their work began a wave of using systematic

desensitization as a coping strategy and treatment method for test anxiety.

Applied relaxation training emerged as a modification of systematic

desensitization. Individuals are trained to use "deep muscle relaxation, breathing

exercises, biofeedback, cue-controlled relaxation, or imagery exercises to obtain a

state of relaxation" (Nicaise, 1995, p. 68). In a study conducted by Chang-Laing

and Denney (as cited in Nicaise, 1995), applied relaxation was more effective in

reducing test anxiety as compared to traditional systematic desensitization.

Denney found that 75% of twenty studies on applied relaxation were successful in

reducing anxiety as reported by subjects.

Another treatment that developed out of systematic desensitization is

Anxiety Management Training (AMT). AMT is aimed at teaching individuals

that they can control their anxiety through practicing visualization of anxiety-

provoking events or situations and then switching to a state of relaxation through

breathing exercises. AMT has shown to be effective in reducing self-reported test

anxiety, but not in improving test performance.

The second major approach of treatment is aimed at reducing test anxiety

through teaching individuals study and test-taking skills. According to the

treatment approach, test anxiety does not cause poor academic performance but

the awareness of past failures causes test anxiety. This treatment approach has

shown improvement in academic performance. However, studies using this

approach have generally used analog tests which may not provoke test anxiety

due to subjects not seeing the test as threatening (Nicaise, 1995).

The third major treatment approach focuses on cognitive attentional treatment.

This method of treatment suggests that test-anxious individuals spend too much

time on self-preoccupied worries and negative cognitions keeping them from

concentrating on the test materials, thus decreasing their academic performance.

This approach focuses on reducing worry and increasing task-relevant cues. "The

focus of intervention is to train the test-anxious to control anxiety with neutral

and positive cognitive appraisal, to reinterpret physiological reactions, and to

reevaluate the threatening nature of exams" (Nicaise, 1995, p.74). Among those

treatments included under this approach are stress inoculation therapy, rational-

emotive therapy, and cognitive restructuring. This method of treatment has

suggested that treatment focusing on cognitive restructuring and physical

relaxation does reduce test anxiety. In addition, this method of treatment has

shown improvement in test performance and has shown treatment maintenance.

Wilson and Rotter (1986) conducted a study with 6th and 7th graders using the combination of AMT and study skills training. Their results indicated that the combination of both methods was more effective in reducing test anxiety and improving academic performance than either approach alone.

Although all three methods have shown to be effective in certain studies, treatment should be tailored to meet the specific needs of the test-anxious individual (Nicaise, 1995). Reduction in test anxiety and improvement in grades are the desired outcomes no matter what treatment method is utilized.

Conclusion

In conclusion, test anxiety can lead to low academic performance, negative self-image, learned helplessness, task-irrelevant cognitions, and problems with retrieving information in the test situation (Austin et al., 1995; Birnbaum & Nasser, 1994; Mealy & Host, 1992; Schonwetter, 1995). Mealy and Host (1992) suggest three areas where teachers can assist test anxious students in overcoming their problems. First, students need to learn study strategies, as well as appropriate situations and circumstances in which to use specific techniques. Secondly, teachers should provide the opportunity for cooperative learning as students often develop test anxiety as a result of feeling isolated. They feel that the other students learn more readily than they do and this enhances their anxiety. Lastly, teachers should create a nonthreatening classroom and testing

environment.

Anyone working with students (school-aged or college) should be aware of the existence of test anxiety and the implications it can have in students' current and future performance, as well as self-esteem.

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Appendix B
The College of West Virginia,
Institutional Review Board (IRB) Proposal

THE COLLEGE OF WEST VIRGINIA
INSTITUTIONAL REVIEW BOARD PROJECT REVIEW REQUEST FORM

Investigator's Name/Titles: Karen Carter-Harvey, Assistant Registrar

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Beckley, WV 25802-2830
Shroyer 204

Collaborating Institutions: Marshall University Graduate College

Research Project Title: The Effects of Anxiety Management and Study Skills
on Test Anxiety in College Students

Number of Subjects: SOCI 201 Sections 01 & 02 (approx 80 students)

Duration of Study: Spring 2000 Semester

Description of Proposed Research Project:
The TAI (Test Anxiety Inventory) will be administered prior to the training and
scores on the exam prior to training will be obtained from the instructor. One
class will be randomly chosen to serve as the experimental group and the other
will serve as the control group. The experimental group will participate in anxiety
management and study skills training. The training will involve group discussions,
anxiety management techniques, test-preparation techniques, and test-taking
strategies. Post-test scores on the TAI immediately following training and test
scores on the exam following training will be obtained. Delayed post-test scores
will be obtained three weeks after training has been completed. The control group
will watch films on unrelated topics.

Synopsis of research project as explained to patient/subject:
Participants will be trained in anxiety management techniques, test-preparation
techniques, and test-taking strategies to see if the combination of this training
reduces test anxiety and improves test performance.

Forseeable risks or discomforts:
No physical risks - minimum psychological risk due to anonymity of subjects
performance and research to be conducted with full respect for each individual

participant's right of confidentiality.

Possible benefits to subject:
Improved test scores, lower levels of test anxiety
Training in anxiety management techniques and test-taking strategies

Other pertinent information:
See prospectus.

Appendix C
IRB Approval Letter

January 27. 2000

Mrs. Karen Carter-Harvey
Graduate Student - Marshall University Graduate College
Masters of Arts in Psychology: School
1897 Blue Jay Six Road
Cool Ridge, WV 25825

Mrs. Carter-Harvey:
My initial review of your Project/Thesis proposal involving *The Effects of Anxiety Management and Study Skills Training on Test Anxiety in College Students*, has led me to conclude that an expedited review by the Institutional Review Board is warranted. In my capacity as the Chair of the Institutional Review Board, I have determined that this research project should be exempt from the formal review process because its implementation and administration should not represent a significant and harmful risk to the human subjects participating in your research.

In light of this determination, you are free to voluntarily pursue this research according to the following stipulations:
- Take special care to follow all appropriate and professional guidelines governing human subject research in the field of Psychology (giving special attention to such issues as confidentiality and the proper treatment of all research subjects),
- Receive the written permission of all affected parties (on a signed form).
- Execute your Project/Thesis proposal as presented on your IRB application form. You must advise your Thesis Committee of any significant changes and receive their approval before implementing said changes. The course instructors responsible for the classes involved in your study must also be informed of any significant changes to your research plan,
- Be prudent and take precautions to protect the safety of all those involved, and
- Ensure that all research, results, and conclusions are clearly identified as your own and that they do **not** necessarily reflect the opinion and/or position of The College of West Virginia

If you have any questions please call me at extension 1540. The IRB shares your interest in research and wishes you much success with your project and educational endeavors.

Sincerely,

Mark D. Miller, Ph.D.
Chair, IRB

Appendix D
Consent Form

CONSENT FORM

Title of Research Project:	**The Effects of Anxiety Management and Study Skills Training on Test Anxiety in College Students**
Project Sponsor:	**Marshall University Graduate College**
Principal Investigator/Department:	**Karen Carter-Harvey** School of Academic Enrichment & Lifelong Learning
Organization/Location:	The College of West Virginia, Shroyer 204

1. You are being invited to participate in a research study designed to see if training in anxiety management techniques, test-taking strategies, and test-preparation techniques will reduce test anxiety and improve test performance.
2. Participants will be given the TAI (Test Anxiety Inventory)* prior to the training and scores on the exam prior to training will be obtained from the instructor. Subjects will participate in anxiety management and study skills training. The training will involve group discussions (when appropriate and if initiated by students), anxiety management techniques, test preparation techniques, and test-taking strategies. There will be between two and three training sessions. Subjects will be given the TAI again immediately following training and test scores on the exam following training will be obtained. Subjects will be given the TAI a third and final time three weeks after training has been completed.

   * The TAI is a 20-item self-report questionnaire. Participants will report frequency of specific anxiety symptoms that they experience when taking a test.
3. There is no physical risk associated with this research project. Psychological risk will be kept to a minimum through anonymity of subjects and research will be conducted with full respect for confidentiality of individual subjects. Any new information developed during the study that may affect your willingness to continue participation will be communicated to you.
4. There is no financial compensation for your participation in this research project.
5. Possible benefits include lower levels of test anxiety, thus improving test

performance.

6. Your identity in this study will be treated as confidential. The results of the study, including laboratory or other data, may be published for scientific purposes but will not give your name or include identifiable references to you. However, any records or data obtained as a result of your participation in this study may be inspected by the sponsor, by any relevant governmental agency (e.g. U.S. Department of Energy), by the Institutional Review Board or by the persons conducting the study, provided that such inspectors are legally obligated to protect any identifiable information from public disclosure, except as otherwise authorized or required by law.

7. You are free to choose whether or not to participate in this study, and there is no penalty or loss of benefits if you decide not to participate. You are also free to leave the study at any time without penalty or loss of benefits, but if you do so you must notify the Principal Investigator (Karen Carter-Harvey).

8. Any questions you may have about this study will be answered by the Principal Investigator, Karen Carter-Harvey at (304) 253-7351 8am-5pm M-F, or (304) 787-3953 after 6pm.
   Any questions you may have about your rights as a research subject will be answered by Karen Carter-Harvey at the numbers listed above or by the Institutional Review Board (Chair, Dr. Mark Miller 253-7351 ext. 1392).
   In case of a research-related emergency, you should call the numbers listed above for Karen Carter-Harvey.

9. I have read and understand this consent form, and I volunteer to participate in this research study. I understand that I will receive a copy of this form. I voluntarily choose to participate, but I understand that my consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand that nothing in this consent form is intended to preempt any applicable Federal, state, or local laws regarding informed consent.

Participant's Name   Date

Participant's Signature   Date

Investigator's Signature   Date

Witness's Signature   Date

Appendix E
Test Anxiety Inventory

Test Attitude Inventory

Please provide the following information:

Name_____ Date_____

Gender (*Please circle*):   **Male   Female**   Score: T_____ W_____ E_____

Directions

A number of statements which people have used to describe themselves are given on the following page. Read each statement and then circle the appropriate number to the right of the statement to indicate how you *generally* feel:

1 = Almost Never,   2 = Sometimes,   3 = Often,   4 = Almost Always.

There are no wrong or right answers. Do not spend too much time on one statement but give the answer which seems to describe how you generally feel. Please answer every statement.

	ALMOST NEVER	SOMETIMES	OFTEN	ALMOST ALWAYS
1. I feel confident and relaxed while taking tests	1	2	3	4
2. While taking examinations I have an uneasy, upset feeling	1	2	3	4
3. Thinking about my grade in a course interferes with my work on tests	1	2	3	4
4. I freeze up on important exams	1	2	3	4
5. During exams I find myself thinking about whether I'll ever get through school	1	2	3	4
6. The harder I work at taking a test, the more confused I get	1	2	3	4
7. Thoughts of doing poorly interfere with my concentration on tests	1	2	3	4
8. I feel very jittery when taking an important test	1	2	3	4
9. Even when I'm well prepared for a test, I feel very nervous about it	1	2	3	4
10. I start feeling very uneasy just before getting a test paper back	1	2	3	4
11. During tests I feel very tense	1	2	3	4
12. I wish examinations did not bother me so much	1	2	3	4
13. During important tests I am so tense that my stomach gets upset	1	2	3	4
14. I seem to defeat myself while working on important tests	1	2	3	4
15. I feel very panicky when I take an important test	1	2	3	4
16. I worry a great deal before taking an important examination	1	2	3	4
17. During tests I find myself thinking about the consequences of failing	1	2	3	4
18. I feel my heart beating very fast during important tests	1	2	3	4
19. After an exam is over I try to stop worrying about it, but I can't	1	2	3	4
20. During examinations I get so nervous that I forget facts I really know	1	2	3	4

TSANP Permissions Test Booklet