

# THE EFFECTIVENESS OF MANAGING MOTIVATION TRAINING ON TEST ANXIETY IN STUDENTS

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**Abstract Background:** The aim of this study was to investigating the effectiveness of managing motivation training on test anxiety in university students. **Materials and Methods:** Research method was quasi-experimental method with pre-test and post-test. Data was collected using demographic data questionnaires and the Sarason test anxiety scale. Based on the latter questionnaire, of the 150 participants, 80 had test anxiety with scores ranging from 13-63 (mild-severe anxiety), of which 76 students were randomly selected and divided into experimental and control groups. With simple random sampling method, 38 students in the experimental group and 38 students in the control group were recruited. In this study, Sarason test anxiety scale in the pre-test and post-test was used. **Results :**For data analysis, descriptive statistics (calculating mean and standard deviation) and inferential statistics (ANCOVA) was used by SPSS software. Results showed that, management motivation have effect in decrease test anxiety level. **Conclusion:** managing motivation training is effective in decreasing test anxiety in students.

**Index Terms—** Motivation Management, Test Anxiety, Students.

## I. INTRODUCTION

Anxiety is a highly unpleasant affective state similar to intense fear which can include feelings of threat, vague objectless fear, a state of uneasiness and tension, and a generalized feeling of apprehension [1]. The challenge of dealing with anxiety is one among a variety of common unpleasant emotional experiences that every human being encounters in different magnitudes at one time or another in life. Anxiety usually occurs when an anticipated event is expected to make demands for which a person is unprepared and therefore lacks the necessary coping skills [2].

Test anxiety was a key factor in undermining student performance. Moderate and appropriate levels of anxiety and nervousness can foster students' motivation, memory and attention [3]. Students face many challenges as they pursue their educational goals. They associate with several identifiable stressors such as energy, time, and learning or enhancing new knowledge and skills. Research has demonstrated that taking

examinations is one of the most stressful of these challenges students face, and poor educational performance was reported as an important consequence[4]. Test Anxiety Disorder, is a condition marked by persistent fear of exam or performance[5]. When students impress negative meaning to such experiences, so their motivations and performances are suffering. Students who continue to have high anxiety during exams over a period of time without learning to control it often begin to feel helpless and even more stressed [6]. There is a progressive relationship between a person's level of arousal and the ability to function effectively. However, when the person is too anxious, the anxiety may interfere with performance because his/her concentration tends to focus too much on his/her anxiety build-up process to the extent that he/she loses focus of the task at hand [7]. In relation to the Inverted -U principle therefore, this study assumed that in a normal situation a student would need some level of anxiety to positively energize him/her to attend to academic pursuits. At mild and moderate anxiety levels, their performance ability is likely to bring forth desirable grades. But once the anxiety escalates and remains beyond optimum level, the possibility is that the student's academic achievement would drop.

Nadeem,,Maqbool, and Zaidi (2012) studied the impact of Anxiety on the Academic Achievement of Students atUniversity level in Bahawalpur, Pakistan. The results show that when anxiety increases, academic achievement decreases both in male and female students [8]. Fiore (2012) studied gender differences in test anxiety. The findings indicated that there was no overall significant difference between the genders; however, when a multivariate regression was conducted to account for variability contributed by age and class there was a statistically significant difference. This finding can be perceived as an indication that it is not gender alone that causes significant differences in general test anxiety[9]. Chandler, (2006) studied gender difference and test anxiety among male and female students in the 4th, 6th, and 10th grades in Southeastern Ohio. The results showed there was a significant difference between the 6th grade males and females during the pretest administration, with the males

showing more anxiety [10]. Devine, Fawcett, Szucs, and Dowker (2012) studied gender differences in mathematics anxiety. Regression analyses revealed that MA was a significant predictor of performance for girls but not for boys. Girls showed higher levels of MA than boys and high levels of MA were related to poorer levels of mathematics performance [11]. Study of. Mazzone, Ducci, ScotoPassaniti, D'Arrigo, and Vitiello, (2007) showed that the prevalence of abnormally high self-reported levels of anxiety increased in frequency with age and was negatively associated with school performance. In addition, Students with high levels of test anxiety score significantly lower on standardized tests (in math & reading), compared with students with lower levels of anxiety. High levels of test anxiety among high school students were manifested by reduced levels of academic performance and that it was not academic performance that affected test anxiety but the reverse; test anxiety affected academic performance [12]. Merrell (2008) studied the relationship between anxiety and task performance. The study reported that as anxiety regarding performance of school tasks becomes more severe, students' ability to adequately perform these tasks gradually declines, and even plummets as the anxiety becomes extreme [13]. Hembree (1988) carried out a meta-analysis of 562 studies in which the relationship between test anxiety and However, the effects of anxiety on an individual may vary depending on its interaction with the task performance process. Low to moderate anxiety is often deemed beneficial as it enables the body to discharge energy equivalent to the task at hand. High anxiety on the other hand, may be devastating because it excites the body system above normal functioning capacity, and impacts negatively on task performance [14]. Coon and Mitterer (2008), while quoting a report by the National Institute of Mental Health (NIMH), have stated that in any given year, roughly 18% of the adult population suffers from anxiety disorder complications; an indication that they had problems with maintaining their anxiety within manageable levels. Young people, who experience excessive fear, worry and uneasiness may have been suffering an anxiety disorder. A study of 9 – 17 years old done by the department showed that as many as 13 of every 100 young people had an anxiety disorder [15].

Causes of test anxiety: Fear of failure. While the pressure to perform can act as a motivator, it can also be devastating to individuals who tie their self-worth to the outcome of a test. Lack of preparation. Waiting until the last minute or not studying at all can leave individuals feeling anxious and overwhelmed. Poor test history. Previous problems or bad experiences with test-taking can lead to a negative mindset and influence performance on future tests. Symptoms of test anxiety: Physical symptoms. Headache, nausea, diarrhea, excessive sweating, shortness of breath, rapid heartbeat, light-headedness and feeling faint can all occur. Test anxiety can lead to a panic attack, which is the abrupt onset of intense fear or discomfort in which individuals may feel like they are unable to breathe or having a heart attack. Emotional symptoms. Feelings of anger, fear, helplessness and

disappointment are common emotional responses to test anxiety. Behavioral/Cognitive symptoms. Difficulty concentrating, thinking negatively and comparing you to others are common symptoms of test anxiety. The current study proposes and investigates two hypotheses in an experimental design: 1- Managing motivation training an decrease effects of students' test anxiety. 2- There is differences between test anxiety among male and female students.

## II. METHOD

In present study, research method is quasi-experimental, a pretest – posttest design with experimental and control groups were applied. The population consisted of male and female students. Based on the Sarason Test Anxiety Scale (STAS), of the 150 participants, 80 had test anxiety with scores ranging from 13-63 (mild-severe anxiety), of which 76 students were randomly selected and divided into experimental and control groups. With simple random sampling method, 38 students in the experimental group and 38 students in the control group were recruited. Data was collected using demographic data questionnaires and the Sarason Test Anxiety Scale (STAS). In this study, the Sarason Test Anxiety Scale (STAS) in the pre-test and post-test was used. In this research one tool and one training package were used: the Sarason Test Anxiety Scale (STAS) and Motivation Management Training Package (MMTP). Firstly, participants of two groups filled the STAS and test anxiety, then the experimental group received the Motivation Management Training Package (MMTP). After intervention subjects were asked to fill STAS and test anxiety again. Sarason Test Analysis Scale (STAS): This scale has a total 25 questions which participants mark as either true or false. The scale has two elements of Excitation and Worrying [16]. Reliability of scale estimated 0.88 in this study via calculating Cronbach's alpha.

Motivation Management Training Package (MMTP): The Motivation Management Training is an educational package which was compiled on the basis of Hassanzadeh Motivation Management principles. This package includes 8 sessions of, 2 hours each.

Motivation management is the all patterns and methods used to make motivations in people, increasing the motivations, making a proper situation to help people's motivation orientations, promoting the positive and constructive motivation and enhancing their efficiency. To perform the research, after using pre –test for statistical population, choosing the statistical sample and assignment of sample in two experimental and control groups randomly, the experimental group is under 2 month instruction of motivation management (one session for each week). So, the aim and content of sessions and its practical workout are regulated in eight sessions, each one 2 hours by educational or training schedule. In every session the discussions about the aim are presented and then the participants is surveyed. And at the end, some workouts are presented by which every student can practice the educational subjects out of educational situation

empirically. The aim of each session is as follow: The first session: Greeting, introducing the research and group acquaintance. The second session: Self-cognition and self-ability (weakness and strength).Being acquaintance with the aim. The third session: Being acquaintance with decision making. Being acquaintance with the concept of motivation and its types. The fourth session: Being acquaintance with attributive styles and the methods of changing or promoting it. The fifth session: Being acquaintance with learning concept and methods of study. The sixth session: Presenting the different methods of making primary concentration and enthusiasm of learning. The seventh session: Presenting guidelines to increase the involvement of learners to have mastery on learning. The eighth session: Conclusion and assembling the presented issues. The important note here is that experimental group actions in each session are based on this instruction. One week after the end of training period, the experimental and control groups would be assessed by the same primary instruments then the results from pre-test and post-test of these groups would be analyzed by the statistical methods .

## RESULTS

The data of all 76 students within two groups to the Sarason Test Anxiety Scale, in pre-test and post-test, before and after receiving the motivation management training, were gathered and scored. Table 1 shows the means and standard deviations of the Test Anxiety (TA) and for 2 groups in pre-test and post-tests. As table 1 shows the TA mean of the experimental group was 0.58 in the pre-test and 0.31 in the post-test, which showed a decrease in TA.

TABLE I. Means and standard deviation of the Test Anxiety

test	Pre-test		Post-
	MSD	M	SD
<b>Experimental</b>	0.58 0.184	0.101	0.31
<b>Control</b>	0.57 0.115	0.107	0.57

The effects of pre-test and the motivation management training were analyzed based on the analysis of covariance and reported in Table 2.

TABLE II. The ANCOVA for the effect of motivation management training on the Test Anxiety

	VariableSource	d	df2	P
	urce	f1		
<b>Test AnxietyPre-test</b>	22.53**	6	0.00	0.264
<b>Group</b>	56.31**	6	0.00	0.503

\*\*Significant at the0.001 level

The results of ANCOVA indicated that there was a significant ( $p < 0.001$ ) linear relationship between the pre-test and the post-test scores for Test Anxiety. On the other hand, the main effect of the group was significant on the Test Anxiety in the post-test after controlling the effect of the pre-test ( $F = 56.31$ ,  $df = 1, 63$ ,  $P < 0.001$ ). This implies that Test Anxiety differed significantly between groups (controlling for the pre-test effect).

The differences between test anxiety among male and female students were analyzed based on the analysis of t-test and reported in Table 3.

Table III. The t-test for the differences between test anxiety among male and female students

Groups	N	S	dft	P-Value
<b>Experime</b>	3	0.	0.130	0.001
<b>ntal</b>	80	310		
<b>Control</b>	3	O.	0.130	0.115
	80	570		

The results of t-test indicated that there was a significant ( $p < 0.001$ ) differences between test anxiety among male and female students.

## DISCUSSION

The results of the current study showed that students who received 8 sessions motivation management training had lower levels of test anxiety. Based on the present research results, managing motivation training has significant effect on decreasing test anxiety .Managing motivation training effectively reduces test anxiety. These results are consistent with previous research findings. MMTP could help to increase an individual's cognitive and excitatory control; those who participated in the training were more able to control agitation, emotions, and excitement. These individuals feel more capable of attaining their goals and are less likely to become emotionally exhausted. Such self-confidence enhances the capacity to control distracting thoughts and worries related to test-taking. The fundamental sense of being in control appears to be associated with an optimistic view of stressful events; a person who feels in control has more access to internal resources for responding to stressors. They are better able to adjust to stressors—such as those relating to test question—as a natural part of life and to develop methods for coping with

stress. They become deeply involved in their studies, feeling this as an interesting, motivational, and important activity. Students with well control should manage their studies[17, 18]. Further, it promotes personal satisfaction, health related behaviors and self-confidence so that the test anxiety will be decreased [6, 19]. G. Ndirangu, J. Muola, M. Kithuka, and D. Nassiuma(2009) carried out a study on An investigation of the relationship between test anxiety and academic performance in secondary schools in Nyeri District, Kenya. The results showed that there was no significant relationship between test anxiety and academic performance. It was also established that both girls and boys are equally affected by test anxiety[20].

Tips for managing test anxiety: Share these tips with your child if he or she is anxious about an upcoming exam: Be prepared. Develop good study habits. Study at least a week or two before the exam, in smaller increments of time and over a few days (instead of pulling an "all-nighter"). Try to simulate exam conditions by working through a practice test, following the same time constraints. Develop good test-taking skills. Read the directions carefully, answer questions you know first and then return to the more difficult ones. Outline essays before you begin to write. Maintain a positive attitude. Remember that your self-worth should not be dependent on or defined by a test grade. Creating a system of rewards and reasonable expectations for studying can help to produce effective studying habits. There is no benefit to negative thinking. Stay focused. Concentrate on the test, not other students during your exams. Try not to talk to other students about the subject material before taking an exam. Practice relaxation techniques. If you feel stressed during the exam, take deep, slow breaths and consciously relax your muscles, one at a time. This can invigorate your body and will allow you to better focus on the exam. Stay healthy. Get enough sleep, eat healthfully, exercise and allow for personal time. If you are exhausted—physically or emotionally—it will be more difficult for you to handle stress and anxiety. Visit the counseling center. Schools are aware of the toll exams can take on students. They have offices or programs specifically dedicated to helping you and providing additional educational support so that you can be successful.

Ideas for Students Who Suffer from Test Anxiety, Salend (2011)[3] has the following suggestions for helping students overcome test anxiety and do their best work on tests: Teach effective test-taking skills. These can help students stay relaxed, focused, and motivated during tests: Do a memory dump or download as soon as the test is handed out, jotting down key points, definitions, formulas, dates, mnemonics, drawings, memory clues, and names you are likely to use in the test. Work on the easier test items first to build confidence. Budget time according to the time allotted the value of each test item, and difficulty level. Highlight essential parts of test directions to focus on specific details (for example, Answer three out of the five essay questions), types of answers being asked for, aids, resources, and assistance you can use, and time, length, and space constraints. Use specific strategies for answering multiple-choice, matching, true-false, sentence-

completion, and essay questions. Teach and prompt the use of anxiety-reduction strategies: 1. Arrive at the test site on time, rather than early, 2. Avoid interactions with other students than can heighten anxiety; 3. Avoid conversations with peers about what was studied, answers to questions, and false rumors; 4. Use encouraging self-statements; 5. Wear comfortable clothes; 6. Take a few minutes to relax and focus on your goals and plans for success; 7. Use anxiety-reduction techniques including meditating, taking deep breaths and breaks, tensing and relaxing muscles; using a squeeze ball; engaging in positive self-talk; focusing on past successes; and listening to guided imagery, affirmations, meditation recordings, or calming music. Positive attribution. Students sometimes approach a test with low expectations for success. "As a result," says Salend, "they ascribe their poor performance to bad luck (e.g., "I got the hardest questions"), teacher mistakes (e.g., "The teacher didn't teach that"), lack of ability (e.g., "I'm not good at that"), and other factors that they view as out of their control." Attribution training is designed to counteract The role of parent feedback is critical to positive attribution, Parents can reinforce effective effort ("You really worked hard to learn this") and get your child focusing on the right kind of reflection after tests ("Can you think of another way you could have answered this?"). Salend [3] also offers suggestions for accommodations your child's teacher could consider: Teach study skills. There's nothing like effective studying to reduce test anxiety, Salend [3] says, but many students don't know the best ways to study. Here are some tips: Give students study guides that address the purpose, content, and format of the test. Ask students to work in groups to predict the content and test items that will be on the test, quiz each other, and create study materials and memory aids. Use educational games and simulated tests to review and practice possible test content, questions, and conditions. Give students a list of items that may be on a test – for example, essay questions. Give study tips, including creating a schedule of study sessions, identifying difficult material that may require further explanation by teachers, focusing on specific goals, having the necessary resources and materials on hand, creating an outline, summary, or visual aid of key points and questions and resources, and using games, flash cards, and mnemonic devices to remember key items. Ask about testing accommodations. These can include timing for the test, scheduling of the test (taking into account other teachers tests), and settings, as well as coaching, formula sheets when appropriate. Consider a range of scoring methods. These might include granting partial credit for correct aspects of an answer, letting students earn back points by revising incorrect answers, or retaking the test using different questions assessing the same content. Collaborate with students' families and other professionals. This includes sharing information about the interventions that you know work best for your child. Evaluate what works and what doesn't work. This involves touching base with students, teachers, and family members. So, it is suggested that effectiveness of such interventions on decreasing test anxiety will be studied in the future.

## References

these thoughts by getting students to focus on the events and actions that contribute to their success and failure on tests and engage in positive attributions that credit effort and factors they can control (e.g., "I worked hard studying for this test" and "I learned that material"). The key insights are: Understand how attributions and effort affect your test performance. Interpret poor performance as a signal to work harder and identify ways to improve. Acknowledge and analyze successful outcomes to identify behaviors that need to be continued and enhanced. Discuss and learn from mistakes.

[1] M. Basavanna, "Dictionary of psychology: Allied Publishers", 2000.

[2] K. A. Syokwaa, P. J. Aloka, and S. N. F. Ndunge, "The Relationship between Anxiety Levels and Academic Achievement among Students in Selected Secondary Schools in Lang'ata District, Kenya, " *Journal of Educational and Social Research*, vol. 4, pp. 403, 2014.

[3] S. J. Salend, "Addressing test anxiety," *Teaching exceptional children*, vol. 44, pp. 58, 2011.

[4] T. Patterson and D. Arnetz, "Factor analysis and predictors of student stressors," *Psychotherapy and Psychosomatics*, vol. 70, pp. 39-49, 2001.

[5] American Psychiatric Association, "DSM-5 Diagnostic and statistical manual of mental disorders," USA, 2013.

[6] C. W. Struthers, R. P. Perry, and V. H. Menec, "An examination of the relationship among academic stress, coping, motivation, and performance in college," *Research in higher education*, vol. 41, pp. 581-592, 2000.

[7] S. A. Rathus and J. S. Nevid, "Adjustment and growth: The challenges of life", 6th ed. Philadelphia: Harcourt Brace College Publisher, 1995.

[8] M. Nadeem, A. Ali, S. Maqbool, and S. U. Zaidi, "Impact of anxiety on the academic achievement of students having different mental abilities at university level in Bahawalpur (southern Punjab) Pakistan," *International Online Journal of Educational Sciences*, vol. 4, pp. 519-528, 2012.

[9] A. M. Fiore, "Gender differences in test anxiety," M.A., Educational Psychology, West Virginia University, West Virginia, 2003.

[10] L. Chandler, "Gender difference and test anxiety," Education, Marshall University., USA, 2006.

[11] A. Devine, K. Fawcett, D. Szucs, and A. Dowker, "Gender differences in mathematics anxiety and the relation to mathematics performance while controlling for test anxiety, " *Behavioral and Brain Functions*, vol. 8, pp. 2-9, 2012.

[12] L. Mazzone, F. Ducci, M. C. Scoto, E. Passaniti, V. G. D'Arrigo, and B. Vitiello, "The role of anxiety symptoms in school performance in a community sample of children and adolescents," *BMC Public Health*, vol. 7, pp. 347, 2007.

[13] K. W. Merrell, "Helping students overcome depression and anxiety: A practical guide," 2nd ed. New York: Guilford Publications, 2013.

[14] R. Hembree, "Correlates, causes, effects, and treatment of test anxiety," *Review of educational research*, vol. 58, pp. 47-77, 1988.

[15] D. Coon and J. Mitterer, "Psychology: A journey: Cengage Learning", 2013.

[16] I. G. Sarason, "Test anxiety and the intellectual performance of college students," *Journal of Educational Psychology*, vol. 52, pp. 201, 1961.

[17] M. Sheard and J. Golby, "Hardiness and undergraduate academic study: The moderating role of commitment," *Personality and Individual Differences*, vol. 43, pp. 579-588, 2007.

[18] M. V. Covington, "A motivational analysis of academic life in college," in *The scholarship of teaching and learning in higher education: An evidence-based perspective*, ed: Springer, 2007, pp. 661-729.

[19] E. P. Sarafino and T. W. Smith, "Health psychology: Biopsychosocial interactions," John Wiley & Sons, 2014.

[20] G. Ndirangu, J. Muola, M. Kithuka, and D. Nassiuma, "An investigation of the relationship between test anxiety and academic performance in secondary schools in Nyeri District, Kenya," *Global journal of educational research*, vol. 8, pp. 1, 2009.