

Test Anxiety: Concept and Implication

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Abstract:

Background: Test anxiety is a combination of physiological over-arousal, tension and somatic symptoms, along with worry, dread, fear of failure, and catastrophizing, that occur before or during test situations.

Objective of this study: The aim of the current study is to give a clear over view about the concept of test anxiety and its implications.

Methods : The issues provided in this article, present a detailed review of the current literature related to testing, including the conceptualization and components of test anxiety, possible sources of perception, Applying these contents as a whole with consideration of current views about test anxiety will broaden our knowledge in the field of test anxiety.

Conclusions: Test anxiety is a broad subject and its effects on the students , as previously mentioned , are obviously remarkable on cognitive , emotional , behavioral and physical well-being of the medical students and subsequently on their academic performance and achievement.

Keywords: Test – Anxiety- Student –Under graduate

I. Introduction

Researchers have shown that medical students experience a high level of psychological pressure during their undergraduate course. This High level of pressure may have a negative impact on intellectual performing and learning of medical students. " The majority of studies on stress in medical education focus on the documentation of stress and information on the correlates of stress" (1)The stress may continue during the internship, postgraduate study period, and later into practical life. The prevalence, causes, and levels of stress among students should be known by medical educators because academic achievement of students will be affected as a consequence of stress. One of the most stressors among the students is that which related to examination.

In A test-oriented community , students' lifestyle are considerably affected by their test performance(2). Assessments are a significant part of community in that they are used to evaluate and figure out educational thresholds, profession positioning, and progression ." Possibly due to pressure to perform well, among other factors, students often experience heightened stress and anxiety during tests; thus, test anxiety has become a pervasive problem over the years(2) Anxiety is a normal physiological reaction, but it may be considered a pathological phenomenon if it is distressing the students or disabling them.

Anxiety is often considered as a disease if it is associated with personal distress; with abnormal behavior, such as impaired concentration or avoidance .It has been found that students continually understand test as a threat that increase stress and a situation surrounded with uncertainty in allowing them illustrate their true success Such feelings among students' limit their potential performance during the test situation, resulting in higher test anxiety directly causing drop in the student achievement (3).

Test anxiety is one of the most devastating factors in educational institutes and other sittings where examining is conducting . Twenty percent of test anxious students quit school before graduating because of repeated failure(4). High test anxiety has been discovered to be associated with low self-esteem, inadequate studying and accomplishment , failing grades, troublesome classroom actions and adverse behavior toward school as a result of an intense fear of failure.(5)Although everybody feels occasional stress when evaluated , test anxiety represents a constant personality predisposition in evaluative situations.(6)The results of researches about test anxiety revealed that consists of multiple affective, intellectual , physical, and behavioral components; can adversely affect achievement of difficult tasks; and adversely related to students' academic performance . Failure expectations, extremely great recognition of importance of achievements , excessively task demands, competitive educational components, normative rating, and high-stakes examinations trigger test anxiety.(7)

Approximately , " 25-40% of the U.S. population suffers from test anxiety.(8)Appropriate methods of measuring the construct of test anxiety , its impact on academic achievement and standardized examination performance were the specific points that studies focused on them to evaluate test anxiety.(9)Also, many researches indicated that test anxiety is associated with fear of negative assessment , inadequate study skills , inadequate test achievement and perfectionism.

" However, the most prominent research on test anxiety continues to include college/university students. Many college students experience academic-related anxiety during their collegiate career, and in fact, previous research suggests 10_35% of college student's experience functionally impairing levels of test anxiety(10,11), which are negatively associated with academic performance.(12)In addition, researches on test anxiety were handled between two disciplines; psychology and education , " although there may be some differences between the type of work accepted in each type of publication; theoretical development in the psychological; and substantive application in the educational"(13)Generally , " Test anxiety is a problem for many college students(5). Combined with a lack of effective study skills, test anxiety may impact a student's ability to perform during stressful situations, resulting in lower test scores and GPAs(14)

The idea of test anxiety is usually referred to student with exams of information such as all levels of school and students with learning problems. In addition, test anxiety may occurs with the patient who expecting a planned medical procedure or waiting results of investigations. Also , the concept is used in referrals to other evaluative circumstances , such as activities, discussions, and presentation events. Anxiety is defined as excessive anxiety about a number of events or activities, occurring more days than not, for at least 6 months (Diagnostic and Statistical Manual of Mental Disorders - DSM-IV, 2000.). According to DSM-IV and The International Classification of Diseases(ICD)-10 ,no specific coding for test anxiety. Tow recent reviews considered it as specific phobia(15)and also as a social phobia (16)which is defined as a fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others and feels he or she will act in an embarrassing manner (DSM-IV, 2000).According to that , test anxiety differs from general anxiety by its occurrence in a specific situations.

" Test anxiety may occurs as a result of a bad individual's self-concept of academic ability when the students believed they will fail or perform poorly in the examination".(8)Also, infrequent test preparation, high-stake examinations and discomfort with testing situation will lead to test anxiety.

" Another important distinction within the test anxiety construct centers on distinguishing between habitual propensities to experience anxiety related to test taking and momentary episodes of anxiety experienced in a specific test taking situation. Using the distinction between trait and state emotions originally introduced by Cattell (1950)(17), the former variant refers to trait test anxiety, and the latter variant to state test anxiety. Trait test anxiety is an individual's disposition to experience anxiety related to tests. Whenever a trait test-anxious individual is confronted with a test or examination, this disposition can manifest itself in the experience of momentary state anxiety." (7)

It seems that test anxiety is a combination of many components affected by the examination-related stress and finally reflects as anxiety. One of the most theoretical conceptual framework was that suggested by Sarason (1984)(18). He postulates that thinking about failing is thought to exhaust cognition which will subsequently affects attention and working memory , thereby reducing full concentration of student. All of these results of thinking about failure will lead to decreased performance on difficult tasks and easy tasks will not be affected . Also , he " suggests that test anxiety is a multi-dimensional construct consisting of cognitive, emotional, behavioral and physiological components." (13)

Students with test anxiety may suffer from impairment of concentration and easy distractibility and may have difficulty in recalling of information as a result of exhausted cognition. The physiological symptoms of test anxiety due to activation of the autonomic system include perspiration, headache, tachycardia and ,inadvanced cases, severe gastrointestinal disturbances . Also, due to test-associated stress and anxiety, students may experience debilitating changes in feelings and mood including dread and panic and " sometimes to the point of paralyzing the student with fear(19)

Anxiety can stimulates powerful inspiration to get attempt to avoid failing. According to that , the implications of anxiety can be variable. Depending on the type of assignment ,anxiety can encourage more firm strategies and techniques of studying and the use of metacognitive techniques such effective time management. Moreover, according to developmental model(20,21) , there is a mutual causation between anxiety and academic achievement where anxiety may have negative effects on student's performance and low academic performance can cause anxiety before and during test. As mentioned , " the findings from a few longitudinal studies corroborate that anxiety and achievement are linked by reciprocal causation over time(7)Also , " Setting high goals correlates with increased test anxiety due to fear of failure(22). Perfectionism is a concept also strongly related to self-imposed performance standards.

Sumi and Kanda (2002)(23)identified a significant correlation between perfectionism ant test anxiety, data also confirmed byKandemir (2013)(24). Therefore, as higher as self-imposed performance standards are, as higher fear of failure will be.(25)We concluded that test anxiety is a significant problem that affects cognition , emotions , behavior and physical status of the students and subsequently reflect on their academic achievement . ***One more thing that previous conceptual frameworks have not explore is the relationship between test anxiety and cheating and is there any reciprocal relationship between them.?***

Literature review:

Many studies were conducted to reveal the prevalence of test anxiety among undergraduate and post-graduate students and its relationship with their academic performance. Out of these studies that which identified the prevalence of test anxiety among medical students where it was found in German 29.9% , Iran 40.3% , Malaysia 52% , and Pakistan 64% , Taiwan 7.0 and in India 6%.⁽²⁶⁾In our area , Arabic countries, there are little studies that investigate test anxiety among college students. In 2010, a study carried by Mostafa Amret *al.*,⁽²⁷⁾ to explore the anxiety and depression experienced by medical students in Mansoura medical school and to identify its associated risk factors , a total of 311 medical students were enrolled in the study. Prevalence of depression and anxiety were 28.3% and 21.2%, respectively. One of these risk factors was test pressure.

Another cross-sectional study was conducted by Hamza M. Abdulghani *et al.* (2011)⁽¹⁾ to determine the prevalence of stress among medical students and to observe an association between the levels of stress and their academic performance, including the sources of their stress . All the medical students from year one to year five levels from the College of Medicine, King Saud University, were enrolled in the study. He found that the total prevalence of stress was 63% , and the prevalence of severe stress was 25%. The prevalence of stress was higher ($p < 0.5$) among females (75.7%) than among males (57%) .⁽¹⁾As he noticed , the main sources of stress stated by the students were coping with their studies (60.3%), followed by home environment (2.8%). However, 36.9% of the students did not mention any source of stress.⁽¹⁾

A research done by Ora Peleg (2009)⁽⁵⁾ to explore differences in test anxiety and self-esteem between adolescents with learning disabilities (LD) and those without them and to study the relationship between test anxiety and academic achievement . He concluded that students with LD reported higher levels of test anxiety and lower levels of self-esteem than their nondisabled peers. Their intense distress can be expected to impair their academic performance.

The Relationship between Test Anxiety and Academic Achievement was examined by Rizwan Akram & Nasir Mahmood⁽³⁾ where a sample of 414 students was randomly selected from seven different science departments in a public sector university in Lahore, Pakistan. They found that a significant negative relationship exists between test anxiety scores and students' achievement scores. Results showed that a cognitive factor (worry) contributes more in test anxiety than affective factors (emotional). Therefore, it is concluded that test anxiety is one of the factors which are responsible for students' underachievement and low performance but it can be managed by appropriate training of students in dealing with factors causing test anxiety.

During 1984 and 1985 , Leo M. Harvill⁽²⁸⁾ compared levels of reported test anxiety among 1st year medical students, college students and high school students. Also he compared test anxiety for 1st year medical students between August and January and between male and female 1st year medical students.²⁰ He found that 1st year medical students report less test anxiety than their counterparts in college and high school. He attributed that to more test-taking experience and greater success on tests. In addition , he noticed a greater test anxiety among the females in all groups and referred that to that medical training is more stressful for women than for men .

Test anxiety among German medical students was investigated by Ozan Yüksel Tektaş *et al.* (2013)⁽²⁹⁾. Out of 909 of first to fifth year medical students , 272 (29.9%) believed that they would suffer from test anxiety.²¹ Test anxiety was detected in the 48.0% of students ($n=208$) out of 436 students (girls=220, boys=216) in a study conducted by Onder Kavakci *et al.*⁽³⁰⁾. among students who will take the University Entrance Examination in Sivas city centre in Turkey. Exam anxiety was found in 40.3% of the males ($n=87$) and in 55.8% of the girls ($n=121$) and the difference between them was statistically significant ($p < 0.001$). 198 students of Belgrade University School of Medicine of all years were enrolled in a study carried by Milan LATAS *et al.*⁽³¹⁾. and The following results have been obtained in the study: first Medical students generally present moderate level of test anxiety; second Female students have statistically significant more intense symptoms of test anxiety than male students; third the most intense symptoms are in the 3rd year and the least are in the 4th year of studies; 4. there is no statistically significant difference in the presence of symptoms of test anxiety among the students who have repeated one of the years of studies and regular students.

II. Conclusion

Test anxiety is a broad subject and its effects on the students , as previously mentioned , are obviously remarkable on cognitive , emotional , behavioral and physical well-being of the medical students and subsequently on their academic performance and achievement. In our society , there are little studies that evaluate or examined test anxiety among medical students. One aspect that most of the literatures does not mentioned is the relation between the test anxiety and cheating . Examining of this will contribute to a better evaluation of test anxiety and its effects on our students.

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