

Investigation of Anxiety Test in Medical Students of Jahrom University of Medical Sciences: A Cross-sectional, Descriptive Study

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Abstract

Introduction: Anxiety refers to an unpleasant state in which humans should cope with undesirable and uncontrollable situations. All people have experienced anxiety to some extent. It significantly contributes to human health. Test anxiety can reduce academic success and efficacy of students. Therefore, the present study aimed to investigate test anxiety of medical students of Jahrom University of Medical Sciences in 2018. **Methods:** This cross-sectional study was conducted on medical students of Jahrom University of Medical Sciences in 2018. Inclusion criterion was studying medicine and exclusion criterion was uncooperative and unwilling students who did not desire to participate in the study. Data collection tools were Demographic Questionnaire and Sarason's Test Anxiety Scale. SPSS v.16 was used to analyze the data. Descriptive statistics (mean, percentages) and analytical statistics (t-test and one-way ANOVA) were also used to analyze the data. **Findings:** The number of participants was 101. Mean age of the participants was 22. Average anxiety score of the participants was 12.86 (SD = 4.69). Statistical test results on the research hypothesis did not show significant differences between different gender, age group, marital status, academic year in terms of test anxiety ($p > 0.05$). **Conclusion:** The results of this study showed that average score of test anxiety of medical students of Jahrom University of Medical Sciences was 12.68.

Keywords: Test Anxiety, Students, Medicine.

Introduction

Anxiety is not an unfamiliar concept in current era. This emotion like fear is not uncommon to humankind and people have always lived with fear or anxiety. Various psychological theories suggested that most human problems stem from anxiety (Thashakkor, 1998). Anxiety is an unpleasant state in which humans should cope with unfavorable and uncontrollable situations. Everyone has experienced this feeling to some extent. It significantly contributes to human health (Aschen, 1997). From another perspective, anxiety refers to a distressing mental state or feeling helpless toward a threat or predicting an unknown threat that either endanger oneself or surrounding people (Ghanei, and et al., 2013). Anxiety reactions are generalized in threatening situations. However, excessive anxiety may be disabling and may interfere with performance, efficacy and effectiveness of an individual (Sansgiry and et al., 2006). Every year thousands of Iranian young people got accepted to universities and endure mental pressures of being away from the family, adapting to dormitories, new terms of studying in a university, academic failure, etc. in an academic period. Medical students should also cope with the stress of clinical settings. These stressful situations can hinder learning and influence efficiency of the students that eventually make it difficult to fulfill the main goal of higher education (Tabibi and et al., 2013). Medical and paramedical students are those segments of society that suffer from anxiety disorders due to stressful events in the field of medicine and the necessity to practice learned theories at patients' bedside (AG, 2001; Moosavi and et al., 2009). Stress can reduce academic efficacy of medical students who may tend to smoking, alcohol abuse, drug abuse or opiate abuse (maladaptive response to stress) to cope with their stress. Those students experiencing high levels of stress are not confident and fail to manage their learning process (Polychronopoulou and et al., 2010). Long-term stress and anxiety have also a negative effect on physical and social performance and future career of students and hinder effective

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and efficient learning (Gorter and et al., 2008). Test is known as a standard method for assessment of knowledge on a variety of fields. The root of test in Persian Language stems from suffering. It is not odd that everyone suffer from a hidden anxiety when one is told “you have to take a test” regardless of their age. McDonald believes that test anxiety is a common feeling among students and should be regarded as a serious problem. Test anxiety as a common feeling among students can be disabling. Those students acquiring good scores in midterms often do not score well at finals due to test anxiety. Those students experiencing test anxiety cannot properly process data, which greatly influence their academic performance (Macdonald Managing stress and Exam Anxiety, 2001) adverse effects of test anxiety. Consultants, psychologists and educators should put on priority these therapies (Rezazadeh & Tavakoli, 2009). Therefore, the present study aimed to investigate test anxiety of medical students of Jahrom University of Medical Sciences in 2018.

Method:

This study is a descriptive cross-sectional study. Necessary license was obtained from the authorities and Ethics Committee of Jahrom University of Medical Sciences (IR.JUMS.REC.1394.165). The author was introduced to the participants and his objectives were explained to them. This was a cross-sectional study that aimed to investigate test anxiety of medical students of Jahrom University of Medical Sciences in 2018. The statistical populations consisted of all medical students of Jahrom University of Medical Sciences in 2013 and 2014. A census was made to select the participants. Inclusion criterion was studying medicine and exclusion criteria was uncooperative and unwilling students who did not desire to participate in the study and uncompleted questionnaires. The designed questionnaires were distributed among the participants to collect the required information. The first part of the questionnaire contained specific items on personal data and background of the students and the second part encompassed the Sarason's Test Anxiety Scale. This scale has 25 items. The responses should be yes or no. The maximum score is 25, which indicates severe anxiety and the minimum score is zero indicating no symptom of anxiety. SPSS v.16 was used to analyze the data. Descriptive statistics (mean, percentages) and analytical statistics (t-test and one-way ANOVA) were used also to analyze the data. Significant level was considered as 0.05 in all statistical tests.

Results:

The number of participants was 101. Frequency and frequency% of the participants are given in Table (1) in terms of demographic variables. Of these, 39 (38.6%) were females and 62 (61.4%) were males. Mean age of the participants was 22 (SD = 4). Minimum age and maximum age of the participants were 19 and 50 respectively. Of these, 90 (89.1%) were single and 11 (10.9%) were married. Twenty students (19.8%) were freshman, 37 (36.6%) were in second year of medical school, 15 (14.9%) in third year of medical school, 16 (15.8%) in fourth year of medical school and 13 (12.9%) in fifth year of medical school and above that.

Table 1 - Frequency and frequency% of the participants based on demographic variables

	Variable	Number	Percent
Gender	Male	62	61.4
	Female	39	38.6
Age (years of age)	20 years of age and younger	23	22.8
	From 21 to 25 years of age	60	59.4
	Above 25 years old	18	17.8
Marital status	Single	90	89.1
	Married	11	10.9
Year of medical school	First year	20	19.8
	Second year	37	36.6
	Third year	15	14.9
	Fourth year	16	15.8
	Fifth year and above that	13	12.9

Table 2 shows mean anxiety score of all students in terms of demographic variables. Average anxiety score of the participants was 12.86 (SD = 4.69).

Table 2 – Mean anxiety score of the participants in terms of demographic variables

	Variable	Mean	SD
Gender	Male	12.78	5.10
	Female	12.98	4.03
Age (years of age)	20 years of age and younger	12.64	4.66
	From 21 to 25 years of age	14.54	4.82
	Above 25 years old	12.00	2.96

Marital status	Single	12.73	4.98
	Married	14.30	5.33
Year of medical school	First year	11.26	3.46
	Second year	13.02	4.56
	Third year	15.38	2.95
	Fourth year	11.25	5.14
	Fifth year and above that	14.4	6.53
Total		12.86	4.69

T-test and one-way ANOVA were used to investigate significant difference between mean anxiety scores in terms of demographic variables.

Gender: T-test results showed no significant difference between mean anxiety scores ($t = 0.213$, $DF = 95$, $p = 0.832$).

Marital status: Although mean anxiety score of married participants was greater than single ones (Table 2), t-test results showed no significant difference between the two groups ($t = 1.267$, $DF = 95$, $p = 0.208$).

Age: Although mean anxiety score increased with age (Table 2), one-way ANOVA results showed no significant difference between the age groups in terms of anxiety level ($F = 1.245$, $p = 0.293$).

Academic year: Although mean anxiety score of third-year students was greater than other groups (Table 2), one-way ANOVA results did not show a significant difference between these groups ($F = 2.4$, $p = 0.056$). Since p-value was slightly greater than 0.05, there was a slight difference between different years of medical school in terms of anxiety levels. Therefore, statistical test results on the research hypothesis did not show a significant difference between gender, age, marital status, academic year in terms of test anxiety.

Discussion:

Anxiety is one of the most common excitable, mood and emotional reactions perceived as a general exhilarating and vague feeling of worriedness with physical symptoms of dyspnea, tachycardia, etc. Ongoing anxiety may cause other psychological disorders. Various studies have shown that anxiety disorder is highly prevalent in students (EyvanBaga, 2016). Therefore, the present study aimed to investigate test anxiety in medical students of Jahrom University of Medical Sciences in 2018. Mean age of the participants was 22 ($SD = 4$). The results showed that average score of anxiety of the students was 12.86 ($SD = 4.69$). Jadoon *et al.* reported anxiety level of medical students as 28% (Jadoon and *et al.*, 2010). Hatami and Ardalan investigated test anxiety of the students in the schools affiliated to Kurdistan University of Medical Sciences and reported anxiety disorder in 14.4% of the students and moderate anxiety in 8.72% of the students and normal anxiety in 12% of the students (Hatami & Ardalan, 2010). Latas *et al.* investigated test anxiety of medical students of Belgerad University of Medical Sciences and reported that most of these students suffered from test anxiety (Latas, and *et al.*, 2010). Darabi *et al.* reported that 66% of students experienced moderate and severe anxiety (Darabi and *et al.*, 2013). According to the results of this study and previous reports, a behavioral therapy and counseling system should be designed and employed to reduce anxiety level in students. The results of this study showed no significant difference between mean score of anxiety and gender ($t = 0.213$, $df = 95$, $p = 0.832$). Afzal *et al.* reported that girls experience more anxiety than boys (Afzal and *et al.*, 2012). Ghasemnejad *et al.* reported that girls suffer from higher levels of anxiety than boys (Gasemnejad and *et al.*, 2011). Sugiura *et al.* reported that female Japanese dental students are more stressed than male Japanese dental students (Sugiura and *et al.*, 2005). One-way ANOVA results did not show any significant difference between different age groups and test anxiety ($F = 1.245$, $p = 0.293$). Resaei *et al.* investigated test anxiety level of the students of Hormozgan University of Medical Sciences and reported a significant relationship between age and test anxiety (Dortaj and *et al.*, 2013). Oladipo *et al.* did not report a significant relationship between age of the participants and test anxiety (Oladipo & Ogungbamila, 2013). Cheraghian *et al.* did not report a significant relationship between anxiety level and age of students (Cheraghian and *et al.*, 2008). Although mean score of anxiety increased with age in this study, there was no significant relationship between age and anxiety level. One-way ANOVA results also did not show a significant difference between marital status and test anxiety. Fathizadeh did not report a significant relationship between marital status and anxiety (Labafinejad & Bossaghzade, 2012). Yazdani *et al.* did not report a significant relationship between marital status and anxiety level (Yazdani & Soleimani, 2012). Although the relationship of anxiety level with marital status was not significant in this study, mean anxiety score of married participants was greater than singles ones. The results were interpreted and no significant difference was found between different years of medical school and test anxiety level ($F = 2.4$, $p = 0.056$). Al-Sowgh did not report a significant relationship between stress and academic year (Al-Sowgh, 2013). Rezazadeh *et al.* did not report a significant relationship between academic year and test anxiety (Rezazadeh & Tavakoli, 2009). Mean anxiety score of third year of medical school was greater than other years of medical school in the present study.

Conclusion:

The results of this study and previous studies showed that almost all students experience test anxiety during their course of study, especially students of medical sciences. So far, no effective measure has been taken to employ counseling systems in order to reduce test anxiety. Therefore, the necessity of such system was recommended in this study more than ever.

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