Research Journal of Applied Sciences 11 (8): 640-644, 2016
ISSN: 1815-932X

Test Anxiety among Iranian College Students; Investigation the Role of Socio-Demographic Factors

[1]Farzad Jalilian, [1]Mehdi Mirzaei-Alavijeh, [1]Behzad Karami-Matin, [2]Seyyed Nasrollah Hosseini, [3]Touraj Ahmadi Jouybari, [4]Mohammad Mahboubi and [5]Abbas Firoozabadi
[1]Research Center for Environmental Determinants of Health, Kermanshah University of Medical Sciences, Kermanshah, Iran
[2]Ministry of Health and Medical Education, Tehran, Iran
[3]Clinical Research Development Center, Imam Khomeini Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran
[4]Abadan School of Medical Sciences, Abadan, Iran
[5]Department of Work and Social Psychology, Maastricht University, Maastricht, Netherlands

Abstract: Test anxiety is consisted of unpleasant affective feelings and experiences, worry and anxiety in which the individual feels that his/her performance is evaluated; the aim of this study was determined of prevalence and socio-demographic related to test anxiety among Iranian college. This cross sectional study was carried out on 320 college students of Kermanshah University of Medical Sciences, the West of Iran which recruited with a random sampling method. Data analyze by SPSS-21. Mean age of the subjects was 21.86 (SD: 2.48) years (range, 18-35 years). The mean score of test anxiety was 2.44 (SD: 0.75). The results indicated significant correlation between same of background variable (such as; sex, age and academic achievement) with test anxiety ($p<0.05$). In addition, anxiety regarding studying more for the test, palpitation feeling and feeling of lack of performance in proportion to one's ability were gained higher scores among test anxiety scale items, respectively. The results indicated the relationship between academic achievement, female gender and younger age with test anxiety.

Key words: Test anxiety, college student, academic achievement, younger, Iran

INTRODUCTION

One of the most extensive research domains in the last few decades has been anxiety and the related fields. Anxiety is not an unfamiliar concept; this concept is one of the feelings, that like fear has been always with human and in different psychological theories it has been referred to as the root of problems and few people can be found that have not faced this issue in their lives. Meanwhile, learners in the educational system experience a wide range of anxieties. These anxieties are sometimes so intense that make the individual's daily and educational lives difficult and one of the main types of these anxieties is test anxiety (Oladipo and Ogungbamila, 2013; MirzaeiAlavijeh *et al*., 2011). Test anxiety is consisted of unpleasant affective feelings and experiences, worry and anxiety in which the individual feels that his/her performance is evaluated. Also, test anxiety refers to a state that creates fear in the individual regarding his/her abilities in doing a duty and its outcome is the reduction of the ability to cope with situations such as test situation (DordiNejad *et al*., 2011; Parks *et al*., 2010). Test anxiety is a condition that impacts the individual's health and its relationship with mental disorders, psychosis, tendency to smoke and drink, its impact on endocrine and exocrine glands, its role in paving the way for temporary forgetfulness and perceptional errors, its interference with the immune level, its relationship with sweating reaction and its impact on blood biochemical factors as a risk factor for cardiovascular diseases have been verified in different studies (Dortaj *et al*., 2013). In addition anxiety could be grounds for substance abuse (Jalilian *et al*., 2016) and studies indicated substance abuse can be followed several complications (Ataee *et al*., 2014; Jouibari *et al*., 2014; Jalilian *et al*., 2015). Test anxiety is a type of mental preoccupation that is characterized by feeling of inferiority and doubt regarding one's abilities and it usually results in negative cognitive evaluation, lack of concentration, unfavorable physiological reactions

Corresponding Author: Touraj Ahmadi Jouybari, Clinical Research Development Center, Imam Khomeini Hospital, Kermanshah University of Medical Sciences, Kermanshah, Iran

and drop in the individual's academic performance (Chapell *et al*., 2005). Test anxiety is one of the common emotions in the contemporary educational system and is one of the main causes of failure in the learners in learning and academic achievement goals (Nie *et al*., 2011). As a common and significant educational phenomenon, test anxiety has a close relationship with academic performance (McDonald, 2001). An individual with a high level of test anxiety becomes immersed in negative thoughts and these thoughts focus on comparison of performance with others' performances, failure results and low level of confidence in performance, excessive overestimated worry, the feeling of lack of preparedness for test and the lack of self-worth. Different negative impacts of test anxiety in students show the necessity of planning and development preventive intervention strategies in universities by using effective planning frameworks (Kok, 2014; Eldredge *et al*., 2011). Therefore, considering the importance of the issue, the present study was conducted with the aim of evaluating test anxiety and its underlying factors in students at Kermanshah University of Medical Sciences.

MATERIALS AND METHODS

This cross-sectional study was conducted on 320 college students in Kermanshah University of Medical Sciences, the West of Iran, during 2015. The sample size was calculated at 95% significant level according to the results of a pilot study and a sample of 320 was estimated. Of the population of 320, 300 (93.7%) signed the consent form and voluntarily agreed to participate in the study which has been approved by substance abuse prevention research center at the Kermanshah University of Medical Sciences, the West of Iran. Data collection conducted after receiving approval from the relevant university ethics committee, this project was carried out and the volunteers were given the self-questionnaire. This study has been approved by the institutional review board at the Kermanshah University of Medical Sciences (KUMS.REC.1394.263). Only the college students in Kermanshah University of medical sciences were eligible to participate in this study. Furthermore, uncomplete questionnaires as well as unwillingness to participate in study were considered as exclusion criteria.

The variables assessed in this study included two sections. Prior to conducting the main project, a pilot study was carried out. Initially the relevant questionnaires were administered to 30 students who were similar to study population in order to estimate the duration of the study conduction and to evaluate the reliability of the questionnaire.

Background questions: Age (years), marital status (single, married), live in dormitory (yes, no), filed of education (Medical, Dentist, Pharmacology, Nursing, Paramedical and Health), parents' educational level (primary school, secondary school, high school diploma and academic education), academic achievement (average score of previous semester of students 0-20).

Westside test anxiety scale: Test anxiety was evaluated by 10 item standard scale; this scale proposed by Driscoll; each item was measured on an ordinal 5-point Likert-type scaling (1 = Not at all or never true, 5 = Extremely or always true). Examples of the items are: the closer I am to a major exam, the harder it is for me to concentrate on the material. The reliability coefficient for the social support scale in our study was 0.83, suggesting that the internal consistency was adequate.

Data were analyzed by SPSS Version 21 using appropriate statistical tests including bivariate correlations, t-test and one-way ANOVA statistical tests at 95% significant level.

RESULTS AND DISCUSSION

Mean age of the subjects was 21.86 (SD: 2.48) years (range, 18-35 years). Table 1 presents more details of demographic characteristics of the participants. The mean score of test anxiety was 2.44 (SD: 0.75). We found the correlation between same of background variable (such as; sex, age and academic achievement) with test anxiety among the participants (Table 2).

Table 1: Demographic characteristics of the participants

Variables	Number	Percent
Sex		
Women	159	53
Men	141	47
Marital status		
Married	31	10.3
Single	264	88
Unanswered	5	1.7
Living in dormitory		
Yes	166	55.3
No	134	44.7
Faculty		
Medical	91	30.3
Dentist	26	8.7
Pharmacy	20	6.7
Nursing	35	11.7
Health and Nutrition	49	16.3
Paramedical	79	26.3
Father's educational level		
Under diploma (under 12 Grades)	117	39
Diploma (12 grades)	104	34.7
Academic education	75	25
Unanswered	4	1.3
Mother's educational level		
Under diploma (under 12 grades)	155	51.7
Diploma (12 grades)	85	28.3
Academic education	54	18
Unanswered	6	2

Table 2: Association between background variable with test anxiety

Variables	Mean (SD)	p-vlaue
Sex		
Women	2.65 (0.75)	0.001
Men	2.20 (0.68)	
Marital status		
Married	2.66 (0.86)	0.094
Single	2.42 (0.73)	
Living in dormitory		
Yes	2.39 (0.69)	0.173
No	2.51 (0.82)	
Faculty		
Medical	2.52 (0.75)	0.206
Dentist	2.29 (0.86)	
Pharmacy	2.45 (0.55)	
Nursing	2.67 (0.72)	
Health and Nutrition	2.35 (0.74)	
Paramedical	2.34 (0.76)	
Father's educational level		
Under diploma	2.45 (0.78)	0.218
Diploma	2.53 (0.81)	
Academic education	2.33 (0.59)	
Mother's educational level		
Under diploma	2.39 (0.73)	0.388
Diploma	2.53 (0.80)	
Academic education	2.49 (0.73)	

Table 3: Assessment the items of test anxiety scale among participants

Items	Mean	SD
The closer I am to a major exam, the harder it is for me to concentrate on the material	2.65	1.19
When I study, I worry that I will not remember the material on the exam	2.55	1.13
During important exams, I think that I am doing awful or that I may fail	2.05	1.10
I lose focus on important exams and I cannot remember material that I knew before the exam	3.09	1.24
I finally remember the answer to exam questions after the exam is already over	2.44	1.13
I worry so much before a major exam that I am too worn out to do my best on the exam	2.06	1.09
I feel out of sorts or not really myself when I take important exams	2.42	1.13
I find that my mind sometimes wanders when I am taking important exams	2.64	1.14
After an exam, I worry about whether I did well enough	2.03	1.11
I struggle with writing assignments or avoid them as long as I can. I feel that whatever I do will not be good enough	2.50	1.08

Finally, Table 3 showed that among items of test anxiety scale: anxiety regarding studying more for the test", "palpitation feeling" and "the feeling of lack of performance in proportion to one's ability" gained higher scores respectively.

Test anxiety is a common issue in students that endangers their health and it is one of the serious problems and concerns in the educational system that is created by different factors. As mentioned, the present study was conducted with the aim of exploring test anxiety and its underlying factors in students at Kermanshah University of Medical Sciences. The findings of the present study indicated that test anxiety mean score among the students was 2.44±0.75. In line with this, a study that was conducted by Moaddeli and Ghazanfari (2005) on the students at nursing and midwifery faculty showed that 90.9% of the students had experienced test anxiety. Also, DordiNejad *et al*. (2013) suggested that the prevalence of test anxiety in students at Iran University of Medical Sciences was average and low. Considering the negative impact of test anxiety on drop in the academic performance of students, the high level of test anxiety prevalence can be alarming to the educational planners and paying attention to the factors impacting test anxiety seem seems necessary for designing preventive interventions. In this regard, factors such as the difficulty of the courses, the way test questions are designed by the professors, test numbers and intervals, the way professors behave, the educational system conditions, fear of failure and the lack of self-confidence in the students have been pointed out (Eum and Rice, 2011; Hosseini *et al*., 2016) and it seems that paying attention to these factors can be useful in reduction of test exam.

The findings of the present study indicated that age had a statistically inverse and significant correlation with test anxiety. In the study by Dortaj *et al*. (2013) the relationship between students' test anxiety and age was statistically positive and significant which is consistent with the findings of the present study.

Another finding of the present study is higher mean of test anxiety score in female students. In this regard, it should be mentioned that one of the main indices of the difference between males and females in terms of anxiety is sexual imprinting. On this basis, the role of females for accepting anxiety as a female characteristic is encouraged while the males act defensively regarding acceptance of anxiety as they consider it a threat against their sense of masculinity (Moaddeli and Ghazanfari, 2005). Therefore, female students should be paid attention more in designing interventions.

The present study did not show a significant statistical difference between single and married students in terms of test anxiety which is consistent with the findings of the study by Cheraghian *et al*. (2008). Of course, in the analysis of the findings of the present study one should talk cautiously as the number of married students was low and it is recommended that future studies evaluate a higher number of married students.

Another finding of the present study was the lack of significant statistical difference in the mean score of test anxiety among different educational levels which is consistent with the findings by Moaddeli and Ghazanfari (2005) Cheraghian *et al*. (2008). Therefore, it seems that different educational levels should be equally paid attention to in designing interventions.

Also, as the findings of the present study indicated, among the items of test anxiety scale, "anxiety regarding studying more for the test", "palpitation feeling" and "the feeling of lack of performance in proportion to one's ability" gained higher scores respectively. In this regard, it should be said that individuals who are never satisfied with their performance, consider a score below a specific score as failure and consider everything to be dependent on studying more for tests will experience more test anxiety (Weiner and Carton, 2012).

The findings of the present study indicated that test anxiety and academic achievement had a significant inverse relationship and these findings are consistent with the findings of similar studies (Cassady, 2004; Hong and Karstensson, 2002). Of course, in this regard Cheraghian *et al*. (2005) did not report a significant relationship between test anxiety and academic performance. Regarding test anxiety prevention, it has been suggested that self-confidence improvement and reduction of fear of failure are useful strategies for reducing test anxiety (Eum and Rice, 2011; MirzaeiAlavijeh *et al*., 2012; Hosseini *et al*., 2016) that should be paid attention to.

This study had few limited. First, data collection was based on self-reporting; this is maybe prone to recall bias. And a second key limitation is the lack of diversity among the participants. We only evaluated the small group of students in health care and medical education fields.

CONCLUSION

It seems test anxiety related with academic achievement, female gender and younger age.

ACKNOWLEDGEMENTS

This research is a part of research project supported by research center for environmental determinants of health, Kermanshah University of Medical Sciences, Kermanshah, Iran. We would like to thank deputy of research of Kermanshah University of Medical Sciences for financial support of this study.

REFERENCES

Ataee, M., T.A. Jouybari, M.M. Alavijeh, A. Aghaei, M. Mahboubi and F.Z. Motlagh, 2014. Images of methamphetamine users among iranian adolescents: An application of prototype willingness model. Life Sci. J., 11: 224-227.

Cassady, J.C., 2004. The influence of cognitive test anxiety across the learning-testing cycle. Learn. Instruction, 14: 569-592.

Chapell, M.S., Z.B. Benjamin, S.E. Micheal, T. Masami, N. Brian, G. Aaron and M. Nicole, 2005. Test anxiety and academic performance in undergraduate and graduate students. J. Educ. Psychol., 97: 268-274.

Cheraghian, B., M.M. Fereidooni, B.S. Pardejani and N. Bavarsad, 2008. Test anxiety and its relationship with academic performance among nursing students. Knowl. Health, 3: 25-29.

DordiNejad, F.G., H. Hakimi, M. Ashouri, M. Dehghani and Z. Zeinali *et al*., 2011. On the relationship between test anxiety and academic performance. Procedia Soc. Behav. Sci., 15: 3774-3778.

Dortaj, F., H. Mousavi and P. Resaei, 2013. Exam anxiety and its relationship with demographic factors among new students in Hormozgan University of medical sciences. Bimonthly J. Hormozgan Univ. Med. Sci., 17: 365-374.

Eldredge, L.K.B., C.M. Markham, G. Kok, R.A. Ruiter and G.S. Parcel, 2016. Planning Health Promotion Programs: An Intervention Mapping Approach. John Wiley and Sons, Hoboken, New Jersey, ISBN: 978-1-119-03549-7, Pages: 622.

Eum, K. and K.G. Rice, 2011. Test anxiety, perfectionism, goal orientation and academic performance. Anxiety Stress Coping, 24: 167-178.

Hong, E. and L. Karstensson, 2002. Antecedents of state test anxiety. Contemp. Educ. Psychol., 27: 348-367.

Hosseini, S.N., M.M. Alavijeh, B.K. Matin, B. Hamzeh and H. Ashtarian *et al*., 2016. Locus of control or self-esteem: Which one is the best predictor of academic achievement in Iranian college students. Iran. J. Psychiatry Behav. Sci., Vol. 10, 10.17795/ijpbs-2602

Jalilian, F., A.M. Mirzaei, J.T. Ahmadi, M.B. Karami and M. Ahmadpanah *et al*., 2016. Psychometric analysis of the substance use risk profile scale (SURPS) among Iranian Medical University students. Res. J. Med. Sci., 10: 152-158.

Jalilian, F., M. Ataee, M.B. Karami, M. Ahmadpanah and T.A. Jouybari *et al*., 2015. Cognitive factors related to drug abuse among a sample of iranian male medical college students. Global J. Health Sci., 7: 143-151.

Jouibari, A.T., N. Fattahi and M. Shamsipur, 2014. Rapid extraction and determination of amphetamines in human urine samples using dispersive liquid-liquid microextraction and solidification of floating organic drop followed by high performance liquid chromatography. J. Pharm. Biomed. Anal., 94: 145-151.

Kok, G., 2014. A practical guide to effective behavior change: How to apply theory-and evidence-based behavior change methods in an intervention. Eur. Health Psychol., 16: 156-170.

McDonald, A.S., 2001. The prevalence and effects of test anxiety in school children. Educ. Psychol., 21: 89-101.

Mirzaei, A.M., N. Rajaei, F. Rezaei, S. Hasanpoor and R. Pirouzeh *et al*., 2012. Comparison of self-esteem, locus of control and their relationship with university students educational status at Shahid Sadoughi University of medical sciences-Yazd. J. Med. Educ. Dev., 7: 58-70.

MirzaeiAlavijeh, M., M. NasirZadeh, M. Mostafei, S. Khodarahmi and F. Jalilian *et al*., 2011. Anxiety prevalence survey of 144 students from payam-e-nour boiene Mieandasht University (Isfahan) and its relationship with irritable bowel syndrome in 2011. Govaresh, 16: 83-90.

Moaddeli, Z. and H.M. Ghazanfari, 2005. A survey on the students exam anxiety in the Fatemeh (PBUH) college of nursing and midwifery, Spring 2004. Strides Dev. Med. Educ., 1: 65-72.

Nie, Y., S. Lau and A.K. Liau, 2011. Role of academic self-efficacy in moderating the relation between task importance and test anxiety. Learn. Individual Differences, 21: 736-741.

Oladipo, S.E. and A. Ogungbamila, 2013. Demographic predictors of test anxiety among undergraduates. Int. J. Learn. Dev., 3: 62-66.

Parks, S.E.J., P.M. Gollwitzer and G. Oettingen, 2010. Implementation intentions and test anxiety: Shielding academic performance from distraction. Learn. Ind. Differ., 20: 30-33.

Weiner, B.A. and J.S. Carton, 2012. Avoidant coping: A mediator of maladaptive perfectionism and test anxiety. Person. Individual Differences, 52: 632-636.