

Depression, Anxiety and Stress Disorders Among Medical Students in King Khalid University, Saudi Arabia

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ABSTRACT

Education in medical colleges can produce a significant psychological stress on undergraduate students. Wide range of psychological morbidity has been reported among medical students ranging from stress, depression and anxiety. Researches reported some psychological changes among medical students specially in beginning of their academic life due to change the environment from the school to the university, information input overload, and academic evaluation (exams and continuous assessment). Presence of these condition among the medical students who will be the future doctors can affect negatively the proficiency of academic study program, clinical practice, their relation and attitude with their colleagues, teachers and ultimately with their patients leading to medical errors and malpractice. The objective of this study was to determine the prevalence of depression, anxiety and stress disorders among medical students in King Khalid University, Saudi Arabia. In this cross sectional study data were analyzed by using SPSS ver 20 descriptive and inferential statistics were obtained. 47.9% of the respondents have normal depression score while 15.5% have mild, 19.7% have moderate, 8.4% have severe and 8.4% have extremely severe depression scores. 41.8% have normal anxiety score, while 12.8% have mild, 21.8% have moderate, 10.3% have severe and 13.2% have extremely severe anxiety. 50.2% have normal stress score while 14.6% have mild, 17.6% have moderate, 12.3% have severe and 5.4% have extremely severe stress. Increasing depression and anxiety should be encountered by the college think tank and it is vital that colleges continually evaluate the mental health of their students and tailor treatment programs to specifically target their needs.

KEY WORDS: academic, anxiety, depression, stress, students

INTRODUCTION:

Education in medical colleges can produce significant psychological stress on undergraduate students. Wide range of psychological morbidity has been reported among medical students ranging from stress, depression and anxiety^[1]. Researches reported some psychological changes among medical students specially in beginning of their academic life due to change the environment from the school to the university, information input overload, and academic

evaluation (exams and continuous assessment).^[2] Presence of these condition among the medical students who will be the future doctors can affect negatively the proficiency of academic study program, clinical practice, their relation and attitude with their colleagues, teachers and ultimately with their patients leading to medical errors^[3,4,5]. The American Psychological Association characterizes anxiety and stress^[6, 7] by feelings of tension, worried thoughts, and physical changes.

The College of Medicine at King Khalid University, Abha, offers medical training to boys and girls both. The medical curriculum at medical school in King Khalid University consists of basic and clinical subjects complimenting each other in a gradient fashion. The learning methods include

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lectures, seminars, laboratory sessions, and clinical rotations. Anxiety is more related to autonomic arousal, skeletal muscle tension, and situational aspects, whereas stress is more related to irritability, impatience, and difficulty in relaxing. A person could be diagnosed as depression if he shows a variable combination of low mood, loss of interest & pleasure, feelings of guilt, low self-esteem, disturbed appetite, disturbed sleep, and disturbed concentration^[8]. It has been reported that medical students suffer from depression, anxiety, and stress^[9-11] Yusoff et al.^[12] have previously reported that healthy students develop depression and stress after starting their medical education. The concern for getting postgraduate training and job chances could be an additional trigger for psychological illness. It has also been reported that doctors prone to have a higher suicidal rate than the general population.^[13]

MATERIALS AND METHODS:

The Study was a descriptive cross sectional study conducted at College of Medicine, Abha city, Saudi Arabia during the period of January 2014 to March 2014. 650 students (boys and girls) were invited to participate in this study, students from the 2nd year to the 6th year were included in the study. The recruited students were informed about the purpose of study and explained about the general instructions. Informed consent was taken prior to the study. The students were allowed to respond in their own time and privacy. The participation was entirely voluntary. The study protocol was approved by the Research Ethical Committee in the college, then they were given the questionnaires which comprised of personal data, depression-anxiety-stress scale (in Arabic language). The DASS is a 42-item self-report instrument designed to measure the three related negative emotional states of depression, anxiety and tension/stress. This diagnostic test provides the researchers with a scale for each factor being measured (stress, depression, and anxiety). This scale ranged from normal, mild, moderate, and severe.

The data were analyzed using SPSS 20, statistical analyses were conducted descriptive (mean, S.D percentages and frequencies) were obtained. Chi square test, Pearson correlation, were applied to measure the significance difference and degree of associations among the variables. p-value less than 0.05 would be considered as a significant.

RESULTS:

Table 1 depicts that the mean age of the

students were 21.7 years with S.D 1.57. Figure 1 shows that 35.1% of the respondents were females while 64.9% were males. Figure 2 depicts the 47.9% of the respondents have normal depression score while 15.5% have mild, 19.7% have moderate, 8.4% have severe and 8.4% have extremely severe depression scores. Figure 3 shows that 41.8% have normal anxiety score, while 12.8% have mild, 21.8 have moderate, 10.3% have severe and 13.2% have extremely severe anxiety. Figure 4 depicts that 50.2% have normal stress score while 14.6% have mild, 17.6% have moderate, 12.3% have severe and 5.4% have extremely severe stress.

Table 1: Age Distribution.

C.I (in years)	Number	%
19-21	250	46.99
22-23	198	37.22
24-25	65	12.22
26-28	19	3.57
Total	532	100.0
Mean	21.7±1.57	

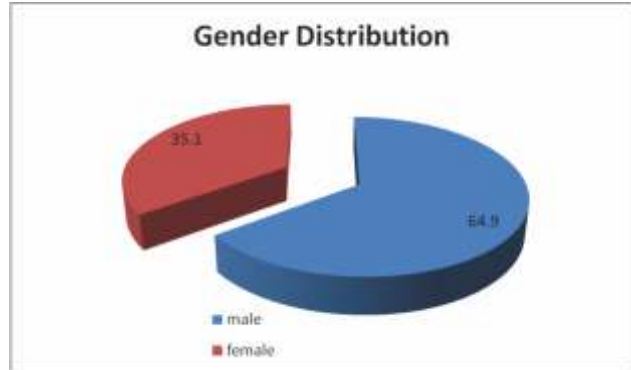


Figure 1: Gender Distribution

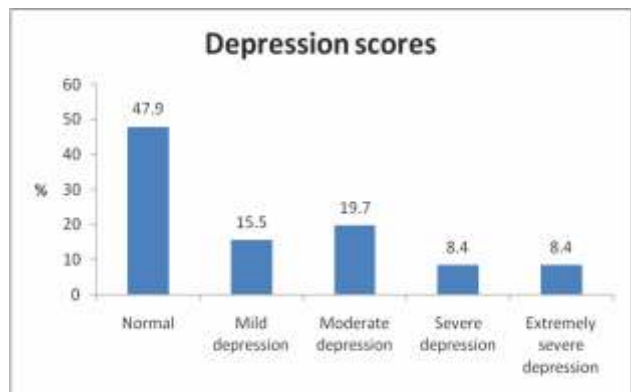


Figure 2: Depression Scores.

Table 2: Depression scores.

Gender	Depression scores										Total
	Normal		Mild depression		Moderate depression		Severe depression		Extremely severe depression		
	No.	%	No.	%	No.	%	No.	%	N.	%	
Male	175	51.62%	49	14.45%	66	19.47%	22	6.49%	27	7.96%	339
Female	75	40.98%	32	17.49%	37	20.22%	22	12.02%	17	9.29%	183
total	250	92.61%	81	31.94%	103	39.69%	44	18.51%	44	17.25%	522

p value = 0.08

Table 3: Stress scores.

Gender	Stress scores										Total
	Normal		Mild stress		Moderate stress		Severe stress		Extremely severe stress		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Male	190	56%	50	15%	56	17%	31	9%	12	4%	339
Female	72	39%	26	14%	36	20%	33	18%	16	9%	183
Total	262	95%	76	29%	92	36%	64	27%	28	12%	522

p value = 0.0001

Table 4: Anxiety Scores

Gender	Anxiety scores										Total
	Normal		Mild anxiety		Moderate anxiety		Severe anxiety		Extremely severe anxiety		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Male	149	43.95%	46	13.57%	76	22.42%	37	10.91%	31	9.14%	339
Female	69	37.70%	21	11.48%	38	20.77%	17	9.29%	38	20.77%	183
Total	218	81.66%	67	25.04%	114	43.18%	54	20.20%	69	29.91%	522

p value= 0.007

Table 2 depicts that there is no significance difference observed while comparing gender and depression scores p-value = 0.08. Table 3 depicts that there is no significance difference observed while comparing gender and stress scores p-value = 0.00001 Table 4 depicts that there is no significance difference observed while comparing gender and anxiety scores p-value = 0.007. Table 5 shows the correlations, age

and depression score, age and anxiety score, age and stress scores have week negative correlations. Level in the college and depression score ,Level in the college and anxiety score, Level in the college and stress scores have week negative correlations. Social status and depression scores, social status and anxiety score and social status and stress score have week positive correlations. GPA and. the scores also have

Table 5: Correlations

Variables	Correlations		
	Depression scores	Anxiety scores	Stress scores
Age	-4%	-5%	-4%
Level in the college	-5%	-6%	-2%
Social status	4%	8%	2%
Parents status	6%	3%	3%
Type of the house	5%	13%	7%
GPA	3%	3%	8%

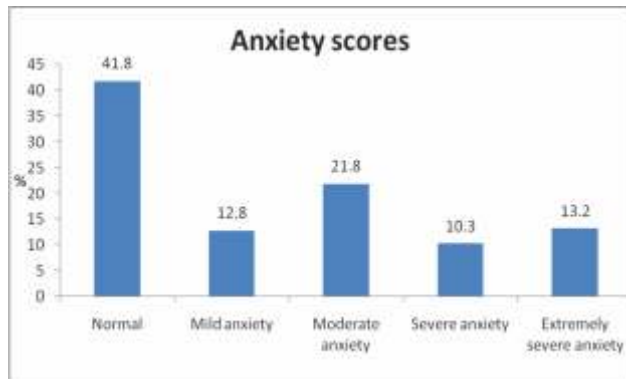


Figure 3: Anxiety Scores

week positive correlations. The same pattern observed in between type of house and scores.

DISCUSSION:

College life can be very stressful. Sometimes parents, faculty and others tend to idealize their college experience and remember it as that idyllic time when they had few worries or responsibilities.

The objective of this study gives an idea of the psychological health of the students in Abha, In our study 52.1% of the students have depression which is inline with other studies the prevalence of depression reported in US (49%),18 Beirut (27.63% and 69%),19 Turkey (27.1%),1 Sweden (12.9%).^[14] Medical students have to deal with stressors specific to medical school in addition to normal stressors of everyday life which explains this high prevalence of anxiety and depression. Anxiety disorders are one of the most common mental health problems on college campuses^[15]. Forty million U.S. adults suffer from an anxiety disorder, and 75 percent of them experience their first episode of anxiety by age 22.^[16] According to a survey from the Anxiety Disorders Association of America (ADAA), universities and colleges also have

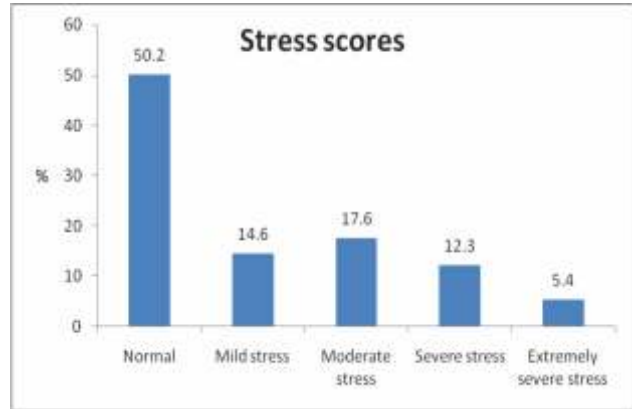


Figure 4: Stress Scores.

seen an increase in students seeking services for anxiety disorders.^[17]

Our study comparing the significance differences among the gender and the depression, anxiety and stress scores and almost inline with the several studies. Most studies have found clear gender differences in the prevalence of depressive disorders. Typically, studies report that women have a prevalence rate for depression up to twice that of men (Bebbington, 1996)^[18]. For example, Kessler et al. (1994)^[19] reported that women in the United States are about two-thirds more likely than men to be depressed, and a national psychiatric morbidity survey in Britain showed a similar greater risk of depression for women (Meltzer et al., 2002).^[20] Gender differences in depression appear to be at their greatest during reproductive years.

CONCLUSION:

Increasing depression and anxiety should be encountered by the college think tank and it is vital that colleges continually evaluate the mental health of their students and tailor treatment programs to specifically target their needs. Based on the study findings, it is recommended to (a) understand one's role in stress reactions; (b) use student counselor services; (c) include stress handling techniques in the some part of curriculum; (d) develop a balanced life-style and effective personal organization; (e) learn specific relaxation techniques; (f) gain perspective on problems by discussing them, and (g) clarify one's values and develop a sense of spirituality.

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REFERENCES:

1. Sawaz Iqbal, Sandhya Gupta, E. Venkatarao. Stress, anxiety & depression among medical undergraduate students & their socio-demographic correlates, *Indian J Med Res* 2015; 141(3): 354–357.
2. Francois J. Cilliers, Lambert W. Schuwirth, Hanelie J. Adendorff, Nicoline Herman, Cees P. van der Vleuten, The mechanism of impact of summative assessment on medical students' learning, *J Adv Health Sci Educ Theory Pract*. 2010; 15(5): 695–715.
3. Kessler RC, Walters EE. Epidemiology of DSM-III-R major depression and minor depression among adolescents and young adults in the National Comorbidity Survey. *Depress Anxiety* 1998; 7(1):3–14.
4. Hysenbegasi A, Hass SL, Rowland CR. The impact of depression on the academic productivity of university students. *J Ment Health Policy Econ* 2005; 8(3):145–51.
5. Sobocki P, Jonsson B, Angst J, Rehnberg C. Cost of depression in Europe. *J Ment Health Policy Econ* 2006; 9(2):87–98.
6. American Psychological Association. Available from: <http://www.apa.org/topics/anxiety/index.aspx>. Accessed July 13, 2014.
7. Stress [webpage on the Internet]. American Psychological Association. Available from: <http://www.apa.org/topics/stress/>. Accessed July 13, 2014.
8. Marcus M, Yasamy MT, van Ommeren M, Chisholm D, Saxena S. Depression, A Global Public Health Concern. Geneva: World Health Organization. Available from: www.who.int/mental_health/management/depression/who_paper_depression_wfmh_2012.pdf. Accessed July 13, 2014.
9. Henning K, Ey S, Shaw D. Perfectionism, the imposter phenomenon and psychological adjustment in medical, dental, nursing and pharmacy students. *Med Educ*. 1998;32:456–464.
10. Roberts LW, Warner TD, Lyketsos C, Frank E, Ganzini L, Carter D. Perceptions of academic vulnerability associated with personal illness: a study of 1,027 students at nine medical schools. Collaborative Research Group on Medical Student Health. *Compr Psychiatry*. 2001; 42:1–15.
11. Dyrbye LN, Thomas MR, Eacker A, et al. Race, ethnicity, and medical student well-being in the United States. *Arch Intern Med*. 2007; 167: 2103–2109.
12. Yusoff MS, Abdul Rahim AF, Baba AA, Ismail SB, Mat Pa MN, Esa AR. The impact of medical education on psychological health of students: a cohort study. *Psychol Health Med*. 2013; 18: 420–430.
13. Schernhammer ES, Colditz GA. Suicide rates among physicians: a quantitative and gender assessment (meta-analysis). *Am J Psychiatry*. 2004; 161:2295–2302.
14. Arif Jadoon NA, Yaqoob R, Raza A, Shehzad MA, Choudhry ZS. Anxiety and depression among medical students: A cross-sectional study Nishtar Medical College, Multan, Pakistan *J Pak Med Assoc*. 2010; 60(8).
15. Nemeroff CB, Bremner JD, Foa EB, Mayberg HS, North CS, Stein MB, Review, Posttraumatic stress disorder: A state-of-the-science review, *J Psychia Res*, 2006; 40(1): 1–21.
16. College Students Promote Mental Health Awareness During National Stress Out Day. <http://www.wvva.com/story/8135978/college-students-promote-mental-health-awareness-during-national-stress-out-day>.
17. An Audit of Mental Health Care at U.S. Colleges and Universities: Focus on Anxiety Disorders, Copyright 2007 Anxiety Disorders Association of America
18. Bebbington P. The origins of sex differences in depressive disorder: bridging the gap *International Review of Psychiatry* 1996; 8(4):295-33.
19. Kessler RC, McGonagle KA, Zhao S et al. Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results from the National Comorbidity Survey. *Arch Gen Psychiatry*, 1994; 51(1):8-19.
20. Meltzer H, Singleton N, Lee A, et al. Comparison of the economic and social characteristics of adults with neurotic disorders, 1993 and 2000. In *The Social and Economic Circumstances of Adults with Mental Disorders* (ed. Office for National Statistics Social Survey Division), 2002; pp. 66 -70. London: ONS.

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