

Original Article

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Evaluation of anxiety and depression among medical students using duke health profile.

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Abstract

Background: Depression is an important health problem due to its prevalence and associated consequences. The life time prevalence of depression ranges between 10 to 21 % in population. According to the precipitation of the WHO, depression is estimated to become the second leading cause of dysfunction by the year 2020. Among medical students, academic stressors include the volume of material to be learned, academic performance and evaluation (examinations and continuous assessments).

Method: A cross-sectional study was conducted and the total of 300 Medical students from 18 to 25 years to age participated in this study. Students in this study were undergraduate students. Duke health profile were given to the students. Data analysis was done by using Chi square test.

Results: 300 students from fourth year and final year were recruited for the study. Mean anxiety score was 35.4 SD + 19.9 with minimum score of 0 and maximum score of 99.6. Mean depression score was 35.9 SD + 21.8 with minimum score of 0 and maximum score of 100. Mean anxiety depression score was 28.8 SD + 33.8 with minimum score of 0 and maximum score of 100. Mental score was compared among medical students, 47.4% of fourth years and 34.2% of had severe mental stress (Score 75 – 100), Anxiety score was compared among medical students, 2.6% of fourth years and 3.4% of had severe anxiety (Score 75 – 100), Depression score was compared among medical students, 3.9% of fourth years and 5.5% of had severe depression (Score 75 – 100), 14.9% of fourth years and 18.5% of had moderate depression (Score 50 – 75).

Conclusion: Anxiety score showed a little female predominance. Depression among medical students of fourth year was little more as compared to the final year students. Depression was more among male students than female students.

Keywords

Depression, Anxiety, Medical students, Dukes health profile.

Introduction

According to WHO, Depression is a common mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration¹.

Depression is an important health problem due to its prevalence and associated

consequences. The life time prevalence of depression ranges between 10 to 21 % in population. According to the precipitation of the WHO, depression is estimated to become the second leading cause of dysfunction by the year 2020². It is important to study depression among university students because most lifetime mental disorders have first onset during the typical university age and mental state of

university students has major implications for campus health services and mental policy making. Depression and anxiety levels in the community are considered as specific indicators for mental status of a person. Various studies have documented stress among medical students. Among medical students, academic stressors include the volume of material to be learned, academic performance and evaluation (examinations and continuous assessments). Academically less successful students reported somewhat higher levels of depressive ideation and symptomatology³. High rates of psychological morbidity among medical students, such as anxiety and depression have been reported in several universities from different western countries as well as from other parts of world⁴. A study was conducted in Karachi in a private university. There were 252 students in 4th year MBBS to 1st year MBBS. Of these 189 were present during the survey. Using anxiety and depression scale it was found out that 113 (60%) students had anxiety and depression. Prevalence of anxiety and depression in students of 4th year, 3rd year, 2nd year and 1st year was 49%, 47%, 73% and 66% respectively⁵. This study suggests that medical students experience anxiety and depression, the finding is consistent with other western studies, however there is no local data available to support our findings. The study finding highlights the need of psychiatric counseling and support services available to vulnerable students³.

Rate of depression among medical students remain high when these students become physicians. Studies from other parts of world have shown a high prevalence of depression among medical students but studies on Indian students are lacking. India has one of the largest numbers of medical colleges and medical students with majority

of the students in private medical schools⁴. However; depression among medical students is a neglected public health problem in India⁶.

Relatively there is lower prevalence of depression in Asian population than in western countries has been consistently reported by previous studies. How people react to this situation contribute to difference in prevalence among countries⁷. According to WHO, it is estimated that 5.8% of men and 9.5% women will experience a depressive episode in a given academic year. Prevalence among medical students in India was about 71.25%⁸ according to study about 14% of medical students have symptoms of moderate to severe depression⁹. It is important for medical educators to know the magnitude of depression in students and factors causing them, which not only affect their health and academic achievement but also has serious consequences as suicide¹⁰. The medical students are less likely than general population to receive appropriate treatment, perhaps because of the stigma associated with depression¹¹.

Methodology

Study Design: Cross sectional study

Study Setting and duration: Data was collected from Allama Iqbal Medical College from April 2015 – June 2015.

Inclusion criteria: Medical students of fourth year and final year of either gender aged 18 to 25 years.

Data Collection and analysis: A Cross sectional study was conducted among medical students of Allama Iqbal Medical College from April 2015 – June 2016. 300 medical students of either gender from fourth and final year were included in the study through a non-probability / purposive sampling.

The Duke Health Profile (DUKE) is a 17-item self-report questionnaire for measuring generic health-related quality of life (HRQOL) during a 1-week period of time. It can be completed by the respondent or by an interviewer¹².

Duke health profile inventory was given to students and scoring for anxiety depression among students was evaluated. Data was entered and analyzed in SPSS Ver: 17.0. Mean and standard deviation was calculated for numerical variables e.g. physical, mental, social health score, general health score, perceived health score and self-esteem score. Frequency and percentages was calculated for nominal variables like anxiety, depression, pain and disability score. Chi-square test was used to assess any statistical significance with $p < .05$ as statistical significant.

Results

300 students from fourth year and final year were recruited for the study. Mean anxiety

score was 35.4 SD + 19.9 with minimum score of 0 and maximum score of 99.6. Mean depression score was 35.9 SD + 21.8 with minimum score of 0 and maximum score of 100. Mean anxiety depression score as shown in Table no.1, is 28.8 SD + 33.8 with minimum score of 0 and maximum score of 100.

Mental score was compared among medical students, 47.4% of fourth years and 34.2% of had severe mental stress (Score 75 – 100), 27.9% of fourth years and 41.1% of had moderate mental stress (Score 50 – 75), 22.1% of fourth years and 22.1% of had mild mental stress (Score 25 – 50)

Anxiety score was compared among medical students, 2.6% of fourth years and 3.4% of had severe anxiety (Score 75 – 100), 14.9% of fourth years and 15.8% of had moderate anxiety (Score 50 – 75), 44.8% of fourth years and 41.1% of had mild anxiety (Score 25 – 50).

Table No 1: Anxiety, Depression and Anxiety and Depression score statistics.

Class of respondent		Mental health score	Anxiety score	Depression score
Fourth Year	<i>N</i>	154	154	154
	<i>Mean</i>	33.875	34.156	26.299
	<i>Std. Deviation</i>	19.7517	21.3805	30.8899
Final year	<i>N</i>	146	146	146
	<i>Mean</i>	37.118	37.74	31.507
	<i>Std. Deviation</i>	20.1911	22.2763	36.6783
Total	<i>N</i>	300	300	300
	<i>Mean</i>	35.453	35.9	28.833
	<i>Std. Deviation</i>	19.9993	21.8582	33.8742

Depression score was compared among medical students, results mentioned in table no 2 shows that almost 3.9% of fourth years and 5.5% of had severe depression (Score 75 – 100), 14.9% of fourth years and 18.5% of had moderate depression (Score 50 – 75), 42.5% of fourth years and 42.5% of had mild depression (Score 25 – 50).

Table No 2: Mental health, anxiety and Depression score frequencies.

Variables	Fourth year	Final year	Total	P value
	n(%)	n(%)	n(%)	
Mental health score				
Score 0 – 25 (No mental stress)	4 (2.6)	5 (3.4)	9 (3.0)	$X^2= 7.148$ P =.067
Score 25 – 50 (Mild mental stress)	34 (22.1)	31 (21.2)	65 (21.7)	
Score 50 – 75 (Moderate mental stress)	43 (27.9)	60 (41.1)	103 (34.3)	
Score 75 – 100 (Severe mental stress)	73 (47.4)	50 (34.2)	123 (41.0)	
Anxiety score				
Score 0 – 25 (No anxiety)	58 (37.7)	58 (39.7)	116 (38.7)	$X^2=0.526$ P=0.913
Score 25 – 50 (Mild anxiety)	69 (44.8)	60 (41.1)	129 (43.0)	
Score 50 – 75 (Moderate anxiety)	23 (14.9)	23 (15.8)	46 (15.3)	
Score 75 – 100 (Severe anxiety)	4 (2.6)	5 (3.4)	9 (3.0)	
Depression score				
Score 0 – 25 (No depression)	60 (39.0)	49 (33.6)	109 (36.3)	$X^2=1.574$ P=0.665

Discussion

Students are subjected to different kinds of stressors, such as the pressure of academics with an obligation to succeed, an uncertain future and difficulties of integrating into the system. The students also face social, emotional and physical and family problems which may affect their learning ability and academic performance^{13, 14}. Too much stress can cause physical and mental health problems, reduce students' self-esteem and may affect students' academic achievement^{15, 16}. The potential negative effects of emotional distress on medical students include impairment of functioning in classroom performance and clinical practice, stress-induced disorders and deteriorating performance. Students in extreme stress or depression need serious attention, otherwise inability to cope

successfully with the enormous stress of education may lead to a cascade of consequences at both personal and professional levels. The emotional status of students during medical school training has been a source of concern, reported as early as 1956. As it may affect the overall performance of students and lead to a cascade of consequences at both personal and professional levels. In recent years there is a growing appreciation of the stresses involved in medical training^{17, 18}. Studies have classified the sources of stress into three main areas: academic pressures, social issues and financial problems¹⁹. In addition to educating in a professional medical course it is also important to take into account the quality of life of the students during the years of medical training. Earlier studies have emphasized this point^{20, 21}.

In our study depression among medical students of fourth year is 81% and among students of the final year is 75%. Depression is more among female students (81%) than male students (76%). The prevalence of depression among medical students is high because in addition to coping with the normal stressors of everyday life, medical students have to deal with stressors specific to medical school, which include information and input overload, financial indebtedness, lack of leisure time, and pressures of work, work relationships and career choices^{22,23}.

A study from Agha Khan University, Pakistan has reported that more than 90% of students felt stressed at one time or the other during their course¹⁶. A similar study from India reported that 73% of the students had perceived stress at one time or the other during their medical school¹⁸.

The study shows that many students find medical studies stressful and it is difficult for them to keep up satisfactory grades which disrupts their psychological well-being. It is important to engage in healthy co-curricular activities to alleviate the daily stressors in order to avoid depression and anxiety. Mental health seminars and public awareness campaigns play an important role in reducing the stigma related to depressive illnesses and encouraging the students suffering from early symptoms of anxiety and depression to seek out early professional care. It is particularly important for students transitioning from pre-clinical to clinical studies as stress of patient care and suffering is added to the already high academic stress.

Conclusion

Our study suggest that depression among medical students of fourth year was more as compared to final year students. Female had

more depression as compared to males. A considerable proportion of medical students were severely depressed in both classes.

Conflicts of interests

None.

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