RESEARCH ARTICLE

Frequency of emotional disturbances among hostelites and day scholars medical students

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Abstract

Objective: This study was aimed to determine and compare the frequency of the emotional disturbances, anxiety and depression among the medical students on Hospital Anxiety Depression scale (HAD) score among the hostelites and day scholars.

Methodology: This cross sectional study was conducted at a private medical college in Faisalabad, Pakistan, from March 2019 to April 2019, comprising of 105 male and female students. Validated Hospital Anxiety depression scale (HAD-A and HAD-D) was used to collect data from 1st year and 2nd year MBBS students in order to evaluate anxiety and depression among them. Data was analyzed on SPSS 21. Pearson's Chi-square was applied to compare the percentages of anxious and depressed subjects among the studied group. Independent sample t-test was applied for comparison of mean HAD scores between hostelites and day scholars. P value ≤ 0.05 was taken as significant.

Results: There were 105 students in the study with a mean age of 19.4±0.68 years. Overall, 82.7% students had anxiety, and 52.1% suffered from depression. Average HAD –A and HAD- D scores were 11.2±3.41 and 7.2±3.37 respectively. Greater number of hostelites was suffering from emotional disturbances as compared to day scholars. HAD –A scores was significantly higher in hostelites than day scholars with P value 0.003*(11.85±3.42 Vs 10.92 ±2.56). HAD- D scores were also higher in hostilities but difference was insignificant. (7.57±3.42 Vs 6.85 ±1.58)

Conclusion: Emotional disturbance including anxiety and depression are found to be highly prevalent among medical students of a private medical college in Faisalabad. Hostelites are more prone to anxiety and depression than day scholars.

Keywords: Depression, Anxiety, HAD-A, HAD-D, Emotional disturbances, Time management. (JPMA 71: 73; 2021)

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Introduction

[1]Emotional disturbances in the form of depression, anxiety and stress are emerging issues among undergraduate medical students that require early intervention worldwide.[1] These problems have a high detrimental effect on individuals and society, which could lead to negative outcomes including medical dropouts, relationship problems, impaired cognition and ability to work effectively.[2] Majority of the young generation instead of facing and combating with difficult situations are becoming rebellious and prone to commit suicide.[1] Prevalence of anxiety in Pakistani medical students has been reported as 44% to 74.2% by various studies.[2-4] This issue should be addressed and intervention taken to adjust the learning environments during different phases of medical education for helping students to cope with stress and make a smooth transition through medical college. Various strategies should be adopted for early diagnosis and management of emotional stress before it goes to the verge of extreme. Stress is defined as the body's non-specific response to demands placed on it due to disturbing events in the environment. It not only destroys mental health but also physical health.[5] It can be classified as good stress and the bad stress. Good stress is considered which motivate the person to do his best in achieving ever best outcomes and if this good stress is not being handled by the subject to attain his designed goals then it is converted into bad stress. It is manifested with different features and odd behaviours, for example the affected subject might try to avoid and face the situation and feel like as his upcoming life is completely doomed, might lose his decision making power and remain always upset, not enjoying simple things, become touchy and easily irritable. Academic burden, time management and personal factors have been described as the main source of stressors among medical students.[1] Strict environment of medical education, difficult studies, examination fear, and financial pressure are being more recognizable distressing factors and causing medical students to be more inclined to emotional disorders, especially stress and depression, as compared to their non-medical peers.[6] Medical students are encouraged to spend adequate time on their social and personal lives along with difficult studies and emphasize the importance of health promoting coping strategies, which might be helpful in overcoming stress throughout

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their medical education. If stress is not timely diagnosed and managed, it could even lead to permanent psychological disorders such as anxiety and depression and not only affect the individual but the whole community and nation.[2,6] The day scholars live with their parents, don't come across with issues such as poor quality food, hostel ragging and homesickness. They share their problems with family members. They perform much better as residential care and encouragement plays a vital role in improving academic performance[7] because of which they are mentally relaxed and have less stress. On the contrary the hostellites (boarders) living in boarding of colleges away from their homes pass through a grief of homesickness and for some students it might prove to be scary to meet a whole bunch of new people.[8] Hostellites have to learn to manage their own affairs and adjust to new condition of living environment without family support or experience to guide them. They have to face many problems independently without support of their family members. They are more prone to poor eating habits, lack of sleep, or acquisition of new habits, such as smoking or drug abuse. All these factors along with burden of difficult medical studies contribute positively to the development of stress and anxiety and poor healthy lifestyle among these students. Because of the pressure and strict study schedule, a large number of medical students suffer from effects of stress like anxiety and suicidal thoughts. Stress leading to suicidal attempts in hostels of medical colleges is continuously increasing in Pakistan, so it is imperative to highlight this issue. That's why we need to evaluate stress among medical students to identify students at risk of depression and anxiety for counseling them to reduce depression and suicidal attacks.

It is imperative to address the emotional disorders among students correctly because it could lead to disastrous consequences if not properly redressed. Internationally lot of work is being carried out effectively to save youth so that they could get a healthy nation. However, limited work is being done here in Pakistan.[3] Hence, there is emergent need to explore and address to these emotional disorders in students of Pakistani universities to prevent psychological morbidity with undesirable impacts all through their professions and lives.

The objectives of the study were to assess the frequency of emotional disturbances, depression and anxiety among medical students using Hospital Anxiety and Depression (HAD) scale and to compare HAD score among hostelites and day scholars.

Methodology

This comparative cross-sectional study was conducted from March 2019 to April 2019 among the medical students of private medical college in Faisalabad. Sample size was calculated by open epi sample size calculator using mean difference (means were taken from previous study) with power 80 and 95% confidence interval (CI).[2] After taking ethical approval from ethical committee of the institute, 105 students including hostilities and day scholar of age ranging between 19 to 25 years were recruited through non probability convenience sampling technique from 1st and 2nd year MBBS students. Hostelites were the students staying in boarding (hostel) of the college away from their homes.[7] After college hours, they are not allowed to go to their homes or elsewhere without permission of the administration. Day scholars were students living in their homes with their parents and receiving good care.[7] All enrolled students were briefed about the importance and objectives of study and were ensured that privacy will be maintained. Unwilling students were not included in the study. A self-administered standardized Hospital Anxiety and Depression scale (HAD) was used to assess the degree of anxiety as well as depression. HADS is a valid and authenticated screening tool that is used to evaluate the emotional state of non-psychiatric subjects in outpatient hospital services. It could help quickly and effectively to identify subjects that show symptoms of depression or anxiety.1 Hence it is now considered one of the commonly used tools to evaluate the degree of emotional stress and anxiety and is also being translated in different languages. HAD questionnaire has 14 -item scale divided into two subscales, anxiety and depression, (HADS Anxiety and HAD -Depression) each one comprising 7 items (depression for even items and anxiety for odd ones). The items are assessed through a Likert scale, ranging from 0 to 3, with the higher scores indicating more severe anxiety and depression. Score of 0 to 7 indicating, no symptoms; score of 8 to 10, borderline case; and score of 11 to 21 is indicating clear symptoms of depression or anxiety.[1] HAD is considered to assess good psychomotor possessions with Cronbach's alpha 0.83 and 0 .82 for HADS-A and HADS-D respectively.[9] HAD questionnaire were provided to the students two months prior to their final Professional examinations as this period is most stressful. Students were allowed to fill it by giving them proper time and privacy after taking informed consent and assuring anonymity. HAD scores for anxiety and depression were compared between hostelites and day scholars.

I**nclusion criteria:** Medical students of first year to final year MBBS.

Exclusion criteria: Students with diagnosed psychological disorder were excluded.

Data was entered and analyzed by using SPSS 21. Pearson's

Chi-square test was applied to compare percentages of anxious and depressed subjects among the studied group. Independent sample t-test was applied for comparison of mean scores of anxiety and depression between in hostelites and day scholars. P value ≤ 0.05 was taken as significant.

Results

This study comprised of 105 students (hostelites 63, 42 day scholars) with a mean age of 19.4±0.68 years; 21 (20.0%) were male and 84 (80%) were females. Descriptive values of the of study population are presented in table 1. Overall, 87 (83%) students had anxiety and 60 (57.1%) had depression. Average HAD –A and HAD- D scores were 11.2±3.41 and 7.2±3.37 respectively. (Table1). Table 2 is indicating that out of total anxious students, 54(85.7%) were staying in hostels and 33(78.6%) were day-scholars. Similarly a larger number of hostelites were suffering from depression than day scholars (60.3% Vs 52.4%) but difference was not significant. (Table 2) HAD –A scores were significantly higher in hostelites than day scholars with *p*-value 0.003* (11.85±3.42 Vs 10.92±2.56). HAD- D scores were also higher in hostelites but difference was insignificant. (7.57±3.42 Vs 6.85±1.58) (*p*-value 0.49) (Table3). Percentages for depression were also compared among subjects suffering from anxiety and those without anxiety. It was interestingly found that subjects having anxiety were falling towards depressive state (*p*-value= 0.002*) (figure).

Table-1: Demographic characteristics of Study population (n=105).

Characteristics	Mean± SD
Age (years)	19.4± 0.687
Weight(kg)	49.8 ± 13.1
Height (m)	1.56± 0.1
Depression	7.2 ± 3.37
Anxiety	11.2±3.41
BMI	20.0± 4.42

SD=Standard deviation, BMI=Body mass index

Table-2: Anxiety and Depression among Hostelites and Day-scholars (n=105).

Study groups	Anxiety		Depression	
	YES [n (%)]	NO [n (%)]	YES [n (%)]	NO [n (%)]
Hostelites (63)	54 (85.7)	9 (14.3)	38 (60.3)	25(39.7)
Day Scholars(42)	33(78.6)	9 (21.4)	22(52.4)	19(45.2)
p value	0.34		0.37	

Table-3: HAD scores of anxiety and depression (n=105).

Study Groups N= 105	HAD-A Mean ±SD	HAD- D Mean ±SD
Hostilities (63)	11.85 ± 3.50	7.57 ± 3.42
Day-scholar (42)	10.42± 2.56	6.85± 1.59
P value	0.03*	0.49

HAD- A=Hospital Anxiety Depression Scale for Anxiety; HAD-D=Hospital Anxiety Depression Scale for depression; SD=standard deviation; *p*-value ≤ 0.05 as considered significant

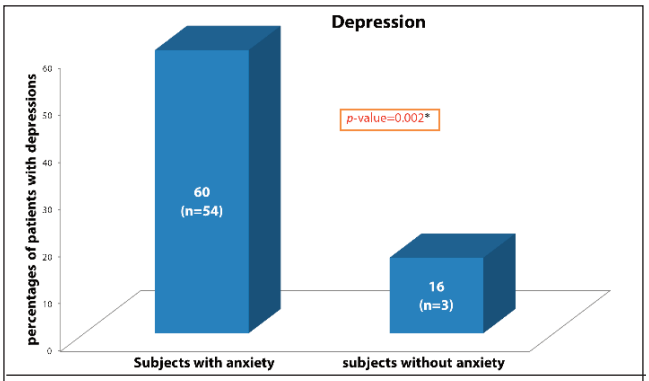

Figure: Percentages of depression among anxious subjects.

Discussion

This study was conducted to address the emotional disturbances like stress, anxiety and depression among medical students. Medical education is considered to be a more stressful period during which they have to cope efficiently.[10] Medical students tend to be high-functioning and efficiently resilient, but accumulation of many stressors leads to emotional disturbances. Time management problems, study pressure, lack of sleep, fear of failing, examinations and grades, feelings of incompetence, clinical rotations, witnessing patient death for the first time were possible stressors that precipitated psychological distress in medical students.[4,11] Various previous studies from different medical schools showed that being a medical student is not easy, as they are under great deal of anxiety and stress not only because of their massive studies and competitive environment that requires social and personal sacrifice but also expectation of parents, family members and friends.[2,12] This all leaves a medical students with little peace of mind. It adds and even the best coping mechanisms could start to fail in students with low resistance to cope with simple situations.[11] Many introverted students did not share their insecurities and anxieties with any one and resulted in disastrous consequences like suicidal attacks.[1] Current study showed that 83% have anxiety and 57.1 % have depression irrespective of being day-scholar or hostelite. This study also revealed that majority of the students whose anxiety level was replenished and saturated, depression started to escalate. The rate of depression in this study is similar to a previous study conducted in Karachi, Pakistan that reported it to be 60%, but slightly higher than an Islamabad based study, which documented 40% of depression in medical students attending public and private medical colleges.[13,4] Singh A et al revealed that 49.1% Indian medical students attending private universities in India

reported depression.[14] Various studies have shown that prevalence of depression in Pakistan as well as India is higher than other countries worldwide. This is supported by our findings of higher rates of depression in our students than reported by Greece and Malaysian studies. Prevalence of 10% in Greece medical students was reported by Yusoff MS et al and 21.7% was documented by Zaid etal among medical students attending public universities in Malaysia.[15,16] Concerning anxiety, results of the current study was closer to recent past study by Rizvi et al in 2015,[4] which reported 74.2% of anxious medical students attending private and public medical colleges in Islamabad and Rawalpindi, Pakistan. Past literature is showing that various researches conducted in Pakistan during 2003 till 2014 have reported 40 to 47% prevalence of anxiety in Pakistani medical students, this data reflected that the prevalence of anxiety is increasing since 2014 till date at alarming rate and it is expected to be increased in next decades worldwide.[12,17-19] Prevalence of anxiety has not only increased in Pakistan but has also increased of anxiety and depression in Malaysia. Earlier studies conducted in 2004 were showing 49.1% prevalence in Malaysian medical students, which increased to 65.8% till 2018 reported by recent past studies.[10,11,20] Most probable causes of increase in emotional disturbance among medical students stated were highly competitive environment of the medical institutes, poor coping strategies and inappropriate counseling.[4] In comparison to the present study, data from many other countries showed lower prevalence of anxiety. It is estimated to be 38.5% in Turkey, 31.2% in British universities, 56% in India, 61.4% in Thailand and 65.5% reported from Greece.[2,4,14,20] This study also revealed that enrolled participants were more hostelites than of day-scholars. In the current study, anxiety and depression (HAD-A and HAD–D) scores were significantly higher in hostelites as compared to day-scholars. These results are inconsistent with the study of Rehmani N and his colleagues.[2] This can explain that hostelites, living away from their families along with a difficult curriculum, are facing multiple stress factors in their routine life such as social relationships, peer pressure, adjusting at a new place, mess issues, quality of food, home sickness, problems with dealing and sharing rooms with colleagues, missing family members for expressing their daily stressors, thereby lacking social support that make them more vulnerable to emotional disturbances such as stress, anxiety and depression posing a threat to life.[2,14] Deficiency in both mentor-mentee and health education programmes have been identified as further contributing factors towards emotional disturbances, which are indicators of mental health.[10,21] Inability to detect and address these psychological disorders appropriately affects student's life and academic performance.[21] As our finding is very important with regards to anxiety and depression in medical students, therefore, as per recommendation of many authors, we also recommend timely student support and counseling. In addition to this, mental health based programmes must be inculcated in our culture at every level of education so that sufferers could be identified in time and seek help before committing unexpected action like suicide.

This study is limited to the students of one medical college and cannot be generalized. It is cross sectional study, therefore, we cannot infer causal association. HAD is not a diagnostic tool and is only useful for screening purposes.

Conclusion

Emotional disturbance including anxiety and depression are found to be highly prevalent among students of medical college in Faisalabad. Hostelites were more prone for anxiety and depression than day scholars. Awareness, early identification, counseling and timely management might reduce emotional disturbances among the students and improve their academic performance and quality of life.

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