



IJCRR

Section: Healthcare

ISI Impact Factor
(2019-20): 1.628

IC Value (2019): 90.81

SJIF (2020) = 7.893



Copyright@IJCRR

Prevalence of Psychiatric Morbidity in Undergraduate Medical Students in a Rural Medical College of Central India using Global Mental Health Assessment Tool - Primary Care (GMHAT-PC)

Prakash B Behere¹, Anweshak Das², Aniruddh P Behere³, Amit B Nagdive⁴, Richa Yadav⁵, Rouchelle Fernandes⁶

¹Former Vice Chancellor, D Y Patil University, Kolhapur (MS); Director Professor, Department of Psychiatry Jawahar Lal Nehru Medical College, Director School of Advanced Studies, Datta Meghe Institute of Medical Sciences (Deemed University), Sawangi, Wardha-442107, (Maharashtra), India; ²Consultant Psychiatrist, Psychiatric Clinic, Guwahati, Assam, India; ³Helen Devos Children's Hospital, Assistant Professor, Department of Pediatrics and Human Development, Michigan State University College of Human Medicine Grand Rapids MI USA, Adjunct Faculty Datta Meghe Institute of Medical Sciences (Deemed University), Wardha-442107, India; ⁴Associate Professor, Department of Psychiatry, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences (Deemed University), Wardha -442107, Maharashtra, India; ⁵Assistant Professor, Department of Psychiatry and Behavioural Sciences, OU College of Medicine, Oklahoma City, Oklahoma, USA Adjunct Faculty, Datta Meghe Institute of Medical Sciences (Deemed University), Wardha, India; ⁶Resident, Department of Psychiatry, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences (Deemed University), Wardha -442107, Maharashtra, India.

ABSTRACT

Background: Many studies report that medical education is one of the toughest courses and that life in a medical college can be quite engaging, demanding and straining to lead to stress both physically and emotionally. It is also observed that many medical students even if having mental health issues would hesitate to contact help providers, especially psychiatrists. It may be due to stigma, negative criticism and discrimination attached to mental illness or due to negative opinions regarding mental illness. Medical students hesitate to seek help from their college and instead prefer to go to another psychiatrist in a different town. It has been time and again stated that early detection and treatment improves the prognosis and reduces lifelong negative consequences.

Objective: To find the prevalence of psychiatric morbidity in undergraduate students of a private medical college in Central India.

Methods: Students were assessed using GMHAT-PC, which is a computer-based diagnostic tool designed to be used in the primary health care setting.

Results: Female participants were significantly more than male participants. Female participants also had a significantly higher prevalence of mental illness compared to their male counterparts.

Conclusion: Medical schools need to give priority to student welfare and not merely focus on student distress. Academic stress has a significant correlation with the prevalence of mental illness. Apart from academic studies, students must also be given the knowledge to improve their coping skills, manage their anger, skills on emotional regulation, impart them skills on conflict resolution and also give them some knowledge to improve their resiliency. These can be possible through Life Skill education and also Social Emotional Training Program.

Key Words: GMHAT-PC, Help-seeking behaviour, High prevalence of anxiety

INTRODUCTION

Globally medical colleges or medical schools strive to usher in an environment where all their students (both undergraduates and post-graduates) become both skilful enough and knowledgeable enough to better serve the society in their

profession as a doctor. These problems hamper academic development, learning of clinical skills and professional abilities.¹ Many studies report that medical education is one of the toughest courses and that life in a medical college can be quite engaging, demanding and straining to lead to stress both physically and emotionally.²

Corresponding Author:

Prakash B Behere, Former Vice Chancellor, D Y Patil University, Kolhapur (MS); Director Professor, Department of Psychiatry Jawahar Lal Nehru Medical College, Director School of Advanced Studies, Datta Meghe Institute of Medical Sciences (Deemed University), Sawangi, Wardha-442107, (Maharashtra), India; Mobile: 9422840552; Email: pbbehere@gmail.com

ISSN: 2231-2196 (Print)

ISSN: 0975-5241 (Online)

Received: 30.09.2020

Revised: 21.11.2020

Accepted: 03.01.2021

Published: 07.05.2021

Life in a Medical college starts around the age of 18. This is the transition phase of late adolescence and early adulthood. Most of us start taking adult roles taking major social roles and responsibilities. Students learn for the first time in their lives to live on their own, maintaining a balance of demands of course work and social life, adjusting to roommates, hostel life, making new relations, cooking food at times, maintaining finances which are challenging and stressful. Although some students can weather this stormy and stressful stage, many students buckle under this stress, cannot cope with the changes and experience emotional maladjustment and psychological problems. Seventy-five per cent of mental illnesses start before age of 24 years which is the prime age of medical education.³ The goals of medical education is to train physicians who are prepared to serve the fundamental purposes of medicine – with requisite knowledge, skills, attitudes, values and responsiveness, so that they may function appropriately and effectively as a basic doctor, physicians of the first contact for the community in the primary care setting both in urban as well as rural areas of our country.⁴ The Bachelor of Medicine and Bachelor of Surgery (MBBS) course in India like in other countries is very demanding and rigorous, taking a toll emotionally in many students leading to depression, anxiety and the unfortunate incidents of suicide or suicidal attempts by the students. The most commonly observed sources of stress were fear of failure, inability to cope with the expectations of parents and peers, lack of peer support, competitive environment, long working hours, difficulty in adjusting, relationship issues, residency uncertainty, family history of mental illness are few reasons of stress.⁵⁻⁷

Gender differences differ from study to study. While some studies have reported that female medical students suffer more. Symptoms suggestive of neuroticism, depression, anxiety, and somatic symptoms were more in female students; other reports have found no sex differences in stress perception.⁸ For many students the first year is found to be more stressful. Other reports have however suggested that the 2nd and 3rd year is stressful. Surprisingly, the psychological morbidity of the first year and fourth year is similar. The however stressful period during the MBBS course has differed from study to study.⁵

Studies worldwide have reported high levels of anxiety, stress and depression in medical students. A study in Saudi Arabia reported the prevalence of severe stress was 25% in medical students.⁹ In another cross-sectional study in the medical school of New Delhi, the prevalence of provisionally diagnosed depressive disorder was 21.5%.¹⁰ One of the studies on undergraduate medical students in the rural area of North-West India, 43% showed psychological distress.¹¹ Another cross-sectional study of 400 medical students from Rural Medical College, Loni reported prevalence of psychiatric morbidity stood at 29.75%.¹² A study done in a private

medical college in Uttar Pradesh found significant stress and anxiety and depression in medical students of the college.¹³ Another study was done on medical students in a medical college of Bangalore reported 42.38% had some form of depression, 54.96% had some form of anxiety and 45.69% had some form of stress.¹⁴ The prevalence of depression among medical students in India was found to be 71.25%.¹⁵ Anxiety and depression were found to be present in 70% according to a Pakistani study.⁷ In an Egyptian study 44% of medical students were diagnosed to have mood and anxiety symptoms.^{16,17}

It is also observed that many medical students even if having mental health issues would hesitate to contact help providers, especially psychiatrists. It may be due to stigma, negative criticism and discrimination attached to mental illness or due to negative opinions regarding mental illness. Medical students hesitate to seek help from their college and instead prefer to go to another psychiatrist in a different town. It has been time and again stated that early detection and treatment improves the prognosis and reduces lifelong negative consequences.^{8,18} This would also contribute to the reduction of the global burden on health and social care systems caused by mental disorders.¹⁹ So it is of utmost importance that we give impetus on early identification and prevention of mental health issues. Modern technology especially computer-assisted methods can be used to augment the available human resources in the health and social well-being sector, especially in low to middle-income countries.¹⁹ GMHAT-PC screening is an easy to use screening method that can be used in the community. It can be used by other mental health professionals as it gives the diagnosis along with its differentials as per the ICD-10 criteria.

In this study, the main aim was to find out the prevalence of psychiatric morbidity in undergraduate students of Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha and whether the frequency of morbidity changes in subsequent years of education.

MATERIALS AND METHODS

The study was conducted in Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha. It was a cross-sectional study with a single evaluation was done. Subjects were selected as random sampling. A total of 650 MBBS students were selected. Electronically data was collected on the GMHAT-PC.

Institutional Ethics Committee approval was taken vide letter number DMIMS (du)/IEC/2012-2013/957. Confidentiality was ensured. They were informed that if any mental illness was detected the help will be provided.

The following were the inclusion criteria:

1. Undergraduate students from the first to fourth years were included.
2. Both sexes were included.
3. Students who were willing to give written informed consent.

Those students who did not give their consent were not interviewed and were excluded from the study. The instrument used was Global Mental Health Assessment Tool – Primary Care Version (GMHAT – PC) – Computer Software. It gives at the end, ICD-10 diagnosis and also, the differential diagnosis. A summary report consisting of symptoms along with their scores is generated and the GMHAT/PC diagnosis is given. The part on history has six sections: presenting problems, past mental health, physical health, family history, personal and social history and substance misuse. There are then sections on mental state examination, assessment of unmet needs and risk assessment. Further sections focus on diagnosis, an overall summary, relevant investigations required, a care plan and a section to gather third party information and to detail the progress on the ward. Finally, there is a checklist of items of explanation to the service-user and the caregivers.

RESULTS

A total of 390 students were enrolled in the study. Two hundred sixty students were excluded from the analysis as 140 did not provide consent to participate in the study, 63 were previously diagnosed to have a psychiatric disorder and 57 students were unavailable to interview. The remaining 390 students were assessed using GMHAT-PC.

Female students were significantly higher in number in the sample, compared to male students. There were 158 (40.5%) male students and 232 (59.5%) female students. This statistically significant difference was seen in 3rd year M.B.B.S. students as well (27.4% vs 72.6%, $p=0.001$). However, there was no statistically significant difference between males and females in 1st, 2nd, and 4th-year students. These findings are shown in Table 1.

Out of 390 students assessed using GMHAT-PC, 144 (36.92%) were found to have a mental illness. A total of 38 (9.7%) male students and 106 (27.2%) female students were found to have a mental illness. Among these students, the majority were from the final year (40.2%), followed by 2nd-year students (38.6%), 1st year students (35.9%) and 32.1% from the 3rd year of M.B.B.S. There was no statistically significant difference between students from different phases of their education, However, a statistically significant difference was seen between male and female students, with mental illness being significantly higher in female students compared to males. These findings are depicted in Table 2.

Out of 390 students 144 (36.92%) students were diagnosed as having a mental illness. Females were significantly higher than males to have a mental illness. Among these students ($n=144$), anxiety disorder was the most commonly diagnosed mental illness. Forty-four (10.8%) students were found to have an anxiety disorder. Depression was the next common mental illness which was diagnosed in a total of 39 (10%) students. Phobia which was mainly social phobia was diagnosed in 21 (5.38%) students. stress was found in 14 (3.42%) of students. Hypochondriasis was found in 5 (2.29%) students of which 4 students were female. They were mostly concerned about their weight. OCD was reported in 3 students (0.77%). The eating disorder was found in 2 (0.51%) students. Both these students were females. 3 (0.77%) students were diagnosed to have psychosis with depression of which 1 student had bipolar disorder. There was 1 (0.26%) student who had schizophrenia who was diagnosed as having psychosis. No statistically significant difference was found in illness wise distribution among boys and girls as shown in Table 3.

DISCUSSION

In the study out of 650 undergraduate medical students, 390 gave their willingness to participate in the interview (response rate was 60%). Some of the students who failed to pass the annual exams and were not in the regular batch of students were also lost. Overall, there were 158 (40.51%) male students and 232 (59.48%) female students which were statistically significant. In the 1st MBBS, there were 45 (43.46%) males and 58 (56.31%) females. In 2nd MBBS there were 45(44.55%) males and 56(55.45%) females. In the 3rd MBBS, there were 23 (27.38%) males and 61(72.62%) females and in the final MBBS, there were 45 (44.12%) males and 57 (55.45%) females. The only significance in gender-wise yearly distribution was found in the 3rd MBBS students. Males were less in the third year as most of them were not in the hostel when the interview sessions were conducted.

Out of 390 students 144 (36.92%) students were diagnosed as having a mental illness. A total of 38(9.74%) male students and 106 (27.18%) female students were diagnosed to have a mental illness. The reported prevalence of mental illness was 20.9%²⁰, 43%¹¹, 29.75%²¹, 55%²², 16%.²³ Out of 144 students diagnosed as having some mental illness, 41 (40.20%) were from final year followed by 39 (38.61%) from 2nd year, 37(35.92%) from 1st year and 27 (32.14%) from 3rd year. There was no significance found in the distribution of illness from 1st year to final year students. However, in the gender-wise distribution of mental illness, it came out to be significant with females having more mental illness than males. Other studies^{9,22} reported a higher prevalence of emotional distress in females than males. In one study males showed

a greater prevalence of mental illness than females.¹¹ In this study females were statistically significant than males. This may be the reason for the increased prevalence of mental illness in females than males. Also, coping strategies were found to be less in females as compared to males. Females react more to a particular situation while males distract. In a small town like Wardha recreational facilities were less for females as compared to males. These factors also contributed to the increased prevalence of mental illness in female students as compared to their male counterparts.

There was no significance found in the distribution of illness from 1st year to final year students. This was in contradiction to other studies. Most of the studies showed statistically significant variation of mental illness with years of study.^{9,10,21,24} One study found more emotional disturbances in 2nd year and 3rd-year students than 1st-year students.²⁵ Most of these studies quoted higher emotional distress in first-year students as they have to adjust to the new environment, cope up with the academic pressure and stay away from home. Final year students also showed a higher prevalence of mental illness mostly emotional distress due to academic pressure, stress of examination, highly competitive environment, uncertain future and pressure of getting into a post-graduation course. In this study first-year, students were interviewed within one or two months of their admission, when they were still new to the medical academics, without exposure to the vast courses of medicine, exam pressure, patient and clinical postings. Most of them were happy and still excited to get admitted to a medical school whereas, the final year students had high stress levels as they had to pass their final MBBS exams. They had their seminar presentations, clinics, pressure to do well in exams and a very rigorous and high competitive routine to follow. Most of them stated that even after passing their final MBBS their future was uncertain as they had to get into a post-graduate course which is very difficult in India due to limited seats for M.D/M.S.

In this study 44 (10.77%) students had anxiety which was the highest diagnosed mental illness. Depression was the next common mental illness to be diagnosed with a total of 39 (10%) students having depression. Also, stress was found in 14 (3.42%) of students. This was concerning other previous studies which reported high levels of anxiety, stress and depression in undergraduate medical students.²⁵⁻²⁹ Although in all previous studies the prevalence rate of anxiety, depression and stress varied. In previous studies, the commonest factor responsible for stress and anxiety were academic and professional factor.³⁰⁻³² The present study also has found the same factors responsible for anxiety and stress. Study-related stress was the most common factor. The other factors were relationship problem, difficulty in adjusting to new friends or roommates, family issues. A very few quoted financial reasons as a stressor. Anxiety was mostly associated with a mild degree of panic symptoms. Depression was mostly associ-

ated with decreased concentration, easy fatigue. However, sleep disturbances, loss of appetite and feeling of hopelessness were not very common. GMHAT also gave a comorbid diagnosis of stress and anxiety in 10 students. In most of the students diagnosed with depression, GMHAT also gave anxiety and stress as the other possible diagnosis. Another finding in this study was 69 students, 23 (9.35%) male and 46 (18.70%) female had some anxiety features and these students showed some score in the anxiety domain, but the score was not enough for them to be diagnosed as having mental illness by GMHAT. Similarly, 35 students, 12 (4.88%) male and 23 (9.35%) female had depressive symptoms and the 31 students 9 (3.66%) were male and 22 (8.94%) females have symptoms of stress. These students were not diagnosed as having mental illness by GMHAT.

Phobia which was mainly social phobia was diagnosed in 21 (5.38%) students. These students mainly had fear of public speaking, speaking in front of the whole class, presenting a seminar or presenting a case. Hypochondriasis was found in 5 (2.29%) students (M: F= 1:4). They were mostly concerned about their weight. OCD was reported in 3 students (0.77%). Eating disorders were found in 2 (0.51%) students. Both these students were females. Eating disorders were found in other previous studies also.³³⁻³⁵ There was 1 (0.26%) student who was diagnosed as having schizophrenia, GMHAT gave the diagnosis as psychosis. Three (0.77%) students were diagnosed to have psychosis with depression of which 1 student had bipolar disorder. This low prevalence of psychosis was concerning the earlier study.²² 2 out of 14,600 students registered with the Leeds Student Medical Practice had a recorded diagnosis of Schizophrenia.³⁶

Thirty-four (23.61%) students out of 144 students having mental illness had the risk of self-harm or suicidal ideation. Out of these 34 students, 28 students had a mild degree of self-harm ideation and 6 had a moderate degree of self-harm ideation. Out of 246 students who were diagnosed to have no mental illness 2 students showed a mild degree of suicidal ideation. There was no student found to be having a severe degree of suicidal ideas. Also, no one has attempted suicide till now.

An interesting finding in this study was that one student being diagnosed as having alcohol abuse. Many of the students reported having an addiction to nicotine (cigarette smoking) (it cannot be diagnosed by GMHAT). Although many students, including females, do take alcohol almost everybody denied taking alcohol. This may be in fear of getting punished by the college administration even though they were earlier intimidated that confidentiality will be maintained. Many of them cited that it was difficult to get alcohol, Wardha being a dry district. The same was with illicit drug use as no student admitted having or taking any illicit drug.

It was seen out of 144 students diagnosed to having mental

illness only 29 (20.13%) students are seeking help from a psychiatrist and have visited the Psychiatry OPD for treatment. In a previous study, it was seen that only 22% of students having psychological distress seek help or use health services for treatment.²⁸ In another study done in India reported 4.7% of students seeking help from a counsellor.¹⁰

CONCLUSION

Medical schools need to give priority to student welfare and not merely focus on student distress. The present study reports a high prevalence of anxiety, depression and stress in medical students which is comparable with studies done around the globe. Academic stress has a significant correlation with the prevalence of mental illness. The Year of the study did not have an impact on the prevalence of mental illness. Females showed more susceptibility towards having a mental illness. Apart from academic studies, students must also be given the knowledge to improve their coping skills, manage their anger, skills on emotional regulation, impart them skills on conflict resolution and also give them some knowledge to improve their resiliency. These can be possible through Life Skill education and also Social Emotional Training Program which should be made part of the medical education curriculum. Students in the medical fraternity are disinclined to ask for help for their mental illness. Initiatives must also be taken to improve their help-seeking behaviour. This calls for collective responsibility in a holistic and integrated manner and a coordinated effort from their parents, teachers, and friends and most importantly the policymakers and management of the medical college they are studying.

ACKNOWLEDGEMENT

Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript and also acknowledge the contribution of our study participants.

Conflict of Interest: None declared.

Source of Funding: None

REFERENCES

- Dyrbye LN, Thomas MR, Shanafelt TD. Medical student distress: causes, consequences, and proposed solutions. In *Mayo Clinic Proceedings* 2005; 80(12):1613-1622.
- Stecker T. Well-being in an academic environment. *Medical Education* 2004; 38:465-78.
- World Health Organization. Improving the mental and brain health of children and adolescents; 2004. Available from: https://www.who.int/mental_health/maternal-child/child_adolescent/en/ [Last accessed on 2020 Apr 11]
- Gopalakrishnan S, Kumar PG. Community medicine teaching and evaluation: scope of betterment. *J Clin. Diagn Res* 2015;9(1):JE01.
- Abraham RR, Zulkifli EM, Fan ES, Xin GN, Lim JT. A report on stress among first-year students in an Indian medical school. *South-East Asia J Med Edu* 2009;3(2):78-81.
- Mohd Sidik S, Rampal L, Kaneson N. Prevalence of emotional disorders among medical students in a Malaysian university. *Asia Pacific Family Med* 2003 Dec;2(4):213-7.
- Alvi T, Assad F, Ramzan M, Khan FA. Depression, anxiety and their associated factors among medical students. *J Coll Physicians Surg Pak* 2010;20(2):122-6.
- Dyrbye LN, Thomas MR, Shanafelt TD. A systematic review of depression, anxiety, and other indicators of psychological distress among US and Canadian medical students. *Academic Med.* 2006;81(4):354-73.
- Abdulghani HM, AlKanhil AA, Mahmoud ES, Ponnampereuma GG, Alfariis EA. Stress and its effects on medical students: a cross-sectional study at a college of medicine in Saudi Arabia. *J Health, Popul Nutr* 2011;29(5):516.
- Sidana S, Kishore J, Ghosh V, Gulati D, Jiloha RC, Anand T. Prevalence of depression in students of a medical college in New Delhi: a cross-sectional study. *Aust Med J.* 2012;5(5):247.
- Kaistha M, Raina SK, Bhardwaj AK, Chander V, Kumar D, Sharma S. A screening for the presence of psychological distress among undergraduate medical students of a medical college in rural north-west India. *Int J Clin Psy* 2013;1(1):20-23.
- Vaidya PM, Mulgaonkar KP. Prevalence of depression anxiety & stress in undergraduate medical students & its co-relation with their academic performance. *Indian Journal of Occupational Therapy.* *Ind J Occup Ther* 2007;39(1): 211-215.
- Singh S, Gupta P. Prevalence of Stress & Psychiatric Morbidity Among Undergraduate Medical Students Studying in a Private Medical College in Uttar Pradesh. *Paripex Ind J Res* 2016;5(12):128-129.
- Ramya N, Ramakrishna RN, Ranganath TS, Subathra V. A cross-sectional study to assess the psychological morbidity (depression, anxiety, stress) among undergraduate medical students in Bangalore Medical College and Research Institute, Bengaluru. *Int J Community Med Public Health* 2018;5(9):4103-6.
- Kumar GS, Jain A, Hegde S. Prevalence of depression and its associated factors using Beck Depression Inventory among students of a medical college in Karnataka. *Ind J Psychiatry* 2012;54(3):223.
- Abolmagd S, Adel A, El Tabei D, Salah H, Emadeldin M, Khalil MA. Psychiatric morbidity among medical students: An Egyptian study. *Egyptian J Psychi* 2018;39(1):48.
- Adhikari A, Dutta A, Sapkota S, Chapagain A, Aryal A, Pradhan A. Prevalence of poor mental health among medical students in Nepal: a cross-sectional study. *BMC Med Educ* 2017;17(1):1-7.
- Finlay-Jones RA, Burvill PW. The prevalence of minor psychiatric morbidity in the community. *Psychol Med* 1977;7(3):475-89.
- Sharma VK, Copeland JR. Detecting mental disorders in primary care. *Mental Health Fam Med* 2009;6(1):11.
- Sreeramareddy CT, Shankar PR, Binu VS, Mukhopadhyay C, Ray B, Menezes RG. Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal. *BMC Med Edu* 2007;7(1):26.
- Aarif SM, Mishra BN. Are the future doctors low on mental health and self-esteem: a cross-sectional study from a rural health university. *Indian J Prev Soc Med* 2009;40(3-4):189-93.
- Strous RD, Shoenfeld N, Lehman A, Wolf A, Snyder L, Barzilai O. Medical students' self-report of mental health conditions. *Int J Med Edu* 2012;3:1.

23. Kaya M, Genc M, Kaya B, Pehlivan E. Prevalence of depressive symptoms, ways of coping, and related factors among medical school and health services higher education students. *Turk Psikiyatri Dergisi* 2007;18(2):137.
24. Ovuga E, Boardman J, Wasserman D. Undergraduate student mental health at Makerere University, Uganda. *World Psychiatry* 2006;5(1):51.
25. Supe AN. A study of stress in medical students at Seth GS Medical College. *J Postgrad Med* 1998;44(1):1.
26. Mosley TH, Perrin SG, Neral SM, Dubbert PM, Grothues CA, Pinto BM. Stress, coping, and well-being among third-year medical students. *Acad Med* 1994; 69(9):765-7.
27. Chan DW. Depressive symptoms and depressed mood among Chinese medical students in Hong Kong. *Comprehen Psychiatry* 1991;32(2):170-180.
28. Khan MS, Mahmood S, Badshah A, Ali SU, Jamal Y. Prevalence of depression, anxiety and their associated factors among medical students in Karachi, Pakistan. *J Pak Med Assoc* 2006;56(12):583.
29. Guthrie EA, Black D, Shaw CM, Hamilton J, Creed FH, Tomenson B. Embarking upon a medical career: psychological morbidity in first-year medical students. *Med Edu* 1995;29(5):337-341.
30. Everly JS, Poff DW, Lamport N, Hamant C, Alvey G. Perceived stressors and coping strategies of occupational therapy students. *Am J Occup Ther* 1994;48(11):1022-1028.
31. Coburn D, Jovaisas AV. Perceived sources of stress among first-year medical students. *J Med Edu* 1975;50 (6):589-95.
32. Moffat KJ, McConnachie A, Ross S, Morrison JM. First-year medical student stress and coping in a problem-based learning medical curriculum. *Med Edu* 2004;38(5):482-491.
33. Lameiras MF, Calado MO, Rodríguez YC, Fernández MP. Eating disorders among Spanish university students. *Actas espanolas de psiquiatria*. 2002;30(6):343-349.
34. Mancilla-Diaz JM, Franco-Paredes K, Vazquez-Arevalo R, Lopez-Aguilar X, Alvarez-Rayon GL, Tellez-Giron MT. A two-stage epidemiologic study on the prevalence of eating disorders in female university students in Mexico. *Eur Eating Disord Rev* 2007;15(6):463-470.
35. Kugu N, Akyuz G, Dogan O, Ersan E, Izgic F. The prevalence of eating disorders among university students and the relationship with some individual characteristics. *Aust New Zea J Psych*. 2006;40(2):129-35.
36. Royal College of Psychiatrists. The mental health of students in higher education. *College Rep* 2011:166.

Table 1: Gender wise distribution of Medical students

Year	Boys	Girls	p-value
1st MBBS	45(43.69%)	58(56.31%)	0.11, NS
2nd MBBS	45(44.55%)	56(55.45%)	0.20, NS
3rd MBBS	23(27.38%)	61(72.62%)	0.0001, S
4th MBBS	45(44.12%)	57(55.88%)	0.11, NS
Total	158 (40.51%)	232(59.48%)	0.016, S
Total students		390	

Table 2: Total number of students suffering from mental illness

Year	No of MBBS students		Total	χ ² -value
	Boys	Girls		
1 st year MBBS students	12(11.65%)	25(24.27%)	37(35.92%)	4.87 P=0.027 S,p<0.05
2 nd year MBBS students	13(12.87%)	26(25.74%)	39(38.61%)	5.38 P=0.020 S,p<0.05
3 rd years MBBS students	3(3.57%)	24(28.57%)	27(32.14%)	22.68 p<0.0001 S
Final year MBBS students	10(9.80%)	31(30.39%)	41(40.20%)	10.13 p=0.001 S,p<0.05
Total	38(9.74%)	106(27.18%)	144(36.92%)	-
χ ² -value (Boys Vs. Girls)	9.58,p=0.002,S,p<0.05			
χ ² -value (Year wise)			1.40 P=0.70 NS,p>0.05	-

Table 3: Distribution of students according to mental illness (n=144)

Mental illness	Boys	%	Girls	%	p-value
Anxiety	10	2.56	32	8.21	0.12,NS,p>0.05
Depression	9	2.31	30	7.69	0.05,NS,p>0.05
Stress	3	0.77	11	2.82	0.31,NS,p>0.05
Phobia	7	1.79	14	3.59	0.40,NS,p>0.05
OCD	1	0.26	2	0.51	0.31,NS,p>0.05
Hypochondriasis	1	0.26	4	1.03	0.31,NS,p>0.05
Eating disorder	0	0.00	2	0.51	0.31,NS,p>0.05
Alcohol	1	0.26	0	0.00	1.00,NS,p>0.05
Psychosis	0	0.00	1	0.26	1.00,NS,p>0.05
Psychosis and Depression	0	0.00	3	0.77	0.31,NS,p>0.05
Anxiety and Stress	5	1.28	5	1.28	1.00,NS,p>0.05
Phobia and Stress	1	0.26	2	0.51	1.00,NS,p>0.05
Total	38	9.74	106	27.18	
χ ² -value			2.78		
p-value			0.97,NS,p>0.05		