Gender Differences in the Prevalence of Depression Amongst Medical Students

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ABSTRACT

Background: Depression is known to be prevalent among medical students particularly in the initial academic years. It is known to adversely affect their physical and mental well being along with academic performance.
Objective: The objective of this study was to determine the prevalence of depression amongst medical students and to observe gender differences in the prevalence rates of depression.
Material And Methods: 100 students which comprised students from 3rd, 4th and 5th year were consecutively selected and were asked to complete Beck Depression Inventory.
Results: The mean age was 21.40 ± S.D 1.46 years. There was an equal gender distribution. Amongst the male students, 30% had minimal depression, 12% mild depression, 16% moderate depression and 42% severe depression; whereas amongst female students, 38% had minimal depression, 36% mild depression, 8% moderate depression and 18% severe depression. However the difference in prevalence of depression in both genders was not statistically significant (p=0.06)
Conclusion: The study revealed significant distress and depression among medical students, with increasing severity of depression observed for male medical students compared to female students.
Keywords: *Depression, stress, students, Beck Depression Inventory*

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INTRODUCTION

Anxiety and depression are global issues which signify the mental health of the population. Depression is common among medical students especially in the initial academic years. It is known to negatively impact their physical and mental wellbeing along with academic performance.[1,2]

Medical education aims to produce well-trained physicians who are capable of bearing the responsibility of advancing public health and achieving high levels of patient-centered care. This requires many years of stressful studying and persistent training. The strenuous struggle that students undergo to become highly qualified healthcare providers might, in certain cases, lead to immense psychosocial distress. [1,2]

Also, the students' psychological and emotional well being may be adversely affected by some aspects of training.[3] Factors that might lead to such psychological issues among medical students include exposure to patients' sufferings, financial matters , poor sleep, and student abuse (verbal, psychological or physical abuse in a medical setting).[4-6]

Depression is amongst the leading causes of disability globally. It includes a constellation of different symptoms comprising sad mood, loss of interest and enjoyment in the activities previously considered pleasurable, reduced energy, poor sleep and disturbed appetite, feelings of inappropriate guilt or low self-esteem, and impaired concentration leading to short term memory difficulties. [7]

Anxiety is an emotion accompanied by tension, worried thoughts and subsequent physical changes, like elevated blood pressure.[8] Stress becomes abnormal when it interferes with the normal life, causing fatigue, inability to concentrate, or irritability.[9]

Keeping this background in mind, our main aim to conduct this study was to determine the prevalence of anxiety and depression amongst the medical students of Yusra Medical & Dental College, and how they differ across both genders.

This study not only will guide us about the burden of depression in this sensitive population but also help identify the gender which is more vulnerable for developing depression, so that future intervention strategies could be focused accordingly for better anxiety and depression attenuation.

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MATERIALS AND METHODS

This descriptive, cross-sectional study, was conducted at Yusra Medical and Dental College, Islamabad, for period of 1 month from 15th June 2014 till 15th July 2014. The subjects included students from the 3rd, 4th and 5th years of MBBS, with a total of 100 students who participated. Students were approached through convenient sampling The students who consented were given a predesigned proforma to obtain relevant sociodemographic details and Beck Depression Inventory was applied to assess the presence of depression and the scores for each of the participants were interpreted. Beck depression inventory (BDI) is a twenty-one-multiple-choice question self-report inventory. Each question has four possible answers. Each answer is given a score from zero to three, indicating the severity of depressive symptoms. It is deemed among the best used tools to assess depression and determine its severity. The questionnaire is well suited for persons in the age band thirteen or more. BDI measures mood, pessimism, sense of failure, self-dissatisfaction, guilt, punishment, self-dislike, self-accusation, suicidal ideas, crying, irritability, social withdrawal, body image, work difficulties, insomnia, fatigue, appetite, weight loss, bodily preoccupation, and loss of libido. Items one to thirteen measure symptoms that are psychological in nature, while items fourteen to twenty-one measure more physical symptoms.

The selected students were personally contacted, informed of the questionnaire, aims, advantages and disadvantages of the study, and asked to take part in the study. Confidentiality was ensured, and they were informed that their results will be sent to them through emails. All the students were contacted directly in and after the end of their classes. They were informed that filling in the questionnaire will not take more than fifteen minutes of their time. Filling in the questionnaire was completely optional for all the students.

The collected data was analysed using SPSS 22.0. For the continuous variables like age, Mean ±S.D was calculated. For the categorical variables like gender, depression and its severity, frequencies and percentages were presented. Chi-square test was used to associate gender and frequency of different severities of depression. P-value less than 0.05 was considered as being statistically significant.

The internal consistency of BDI was described as around 0.9 and the retest reliability ranged from 0.73 to 0.96. The correlation between BDI-II and the Beck Depression Inventory (BDI-I) was high and substantial overlap with measures of depression and anxiety was reported. The criterion-based validity showed good sensitivity and specificity for detecting depression in comparison to the adopted gold standard. However, the cutoff score to screen for depression varied according to the type of sample. Factor analysis showed a robust dimension of general depression composed by two constructs: cognitive-affective and somatic-vegetative.

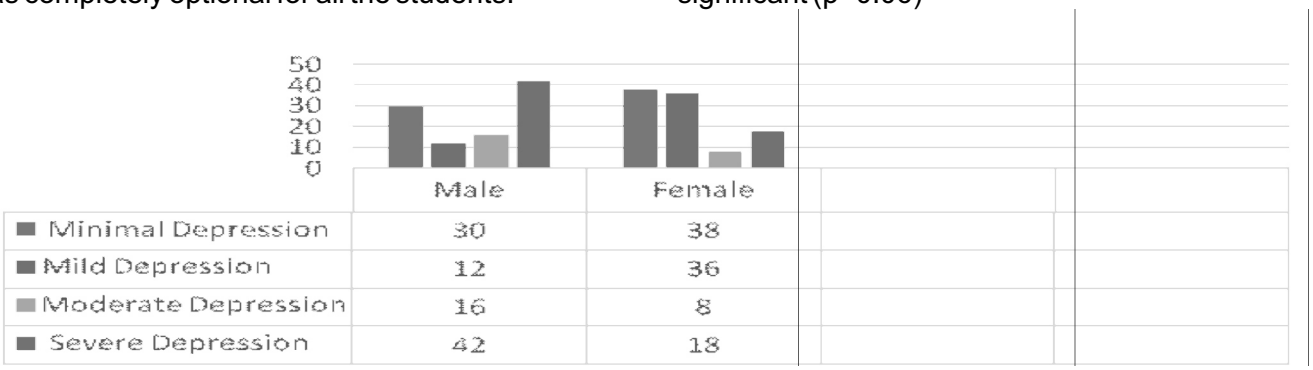
RESULTS:

The total sample was 100 students which included students of both genders from 3rd, 4th and 5th Year MBBS.

The mean age was 21.40 ± S.D 1.46 years. There was an equal gender distribution.

Amongst the male students, 30% had minimal depression, 12% mild depression, 16% moderate depression and 42% severe depression; whereas amongst female students, 38% had minimal depression, 36% mild depression, 8% moderate depression and 18% severe depression.

However the difference in prevalence of depression in both genders was not statistically significant (p=0.06)



p-value=0.06 (where p= 0.05 considered statistically significant)

Figure 1: Showing The Gender Wise Severity Of Depression Amongst The Medical Students

DISCUSSION:

The current study revealed a high prevalence of depression amongst medical students, with more severe depression presenting amongst male students. This is a notable finding and comparable across different studies focused on this issue.

Jadoon N et.al in their study similarly found a high prevalence of depression (43.89%) amongst medical students, however female students were more depressed.[5]

The results of our study differ significantly from those conducted earlier in Karachi which reported prevalence rates of 60% and 70% respectively.[6,7]

A study from India[8] is worth discussing here, which was carried out on medical students to look for prevalence of depression and its associated risk factors. The overall prevalence of depression was found to be 71.25%. Among those with depression, a majority (80%) had mild and moderate degree of depression. The study showed that 46.3% (132) of the depressed were females and 53.7% (153) were males. According to cut-off scores of Beck Depression Inventory, 115 students (29.8%) scored as normal (0-9), 111 (27.8%) as mild (10-18), 117 (29.3%) as moderate (19-29), 30 (7.5%) as severe (30-40), and 27 (6.7%) as very severe (>40) depression.

Anxiety is more prevalent amongst medical students as compared todepression. Females are more prone to anxiety and depression as compared to males, as suggested by a study conducted in Bairut,[9] which contradicts with our study finding. One reason could be the smaller sample we selected that could have possibly biased the results.

Gender differences in depression have been found in both practicing and newly qualified physicians, which are in line with epidemiological studies indicating that depression is more common among women than men.[10]

The prevailing view is that depression rises during undergraduate medical education and that this rise is more pronounced among women.[11,12]

A study done in Saudi Arabia showed that female medical students (66%) were more vulnerable to developing anxiety and depression as compared to males.[13]

However, one of the studies, carried out at the School of Medicine of University of Cambridge, supports our finding of males being more prone to depression. The study found that among groups of male and female medical students in Cambridge, the prevalence of depression ranged from 2.2% to 14.8%. No significant changes in mean depression scores were seen among Core Science component students or among women in the Clinical component. A statistically significant increase in mean depression scores was found for men during the Clinical component.[14]

Conversely another international study[15]on adolescent population aged 1825 reported a prevalence of 12% among men and 18% among women, again slightly higher for females.

There are certain limitations to our study, as in, we selected a small sample, which could limit the generalizability of the study findings; also we did not look into specific risk factors for depression and how they could exert their influence on both genders.

CONCLUSION:

The current study has found a high prevalence of depression amongst medical students, with much higher prevalence for men and more likelihood for severe depression. This should alarm us and make us more vigilant in terms of making timely assessments and design appropriate interventions for the vulnerable medical student population, for their improved quality of life.

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