ORIGINAL ARTICLE

Gender Difference in Depression and Suicidal Ideation of medical students

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ABSTRACT

Aim: To assess the gender difference in frequency of depression and suicidal ideation in students in the initial years of medical study

Study design: Descriptive cross-sectional study

Place and duration of study: Lahore Medical & Dental College (LMDC) Lahore, in July 2016.

Methods: Six items Kutcher Adolescent Depression Scale was used to screen second year medical students for depression and suicidal ideation. Depression was established if total score of KADS-6 was either 6 or more.Data was entered, cleaned and analysed in SPSS version 22. Association of gender of participants with depression and suicidal ideation was ascertained by applying chi square test, with p≤0.05 as cut off point for statistical significance.

Results: Among 114study participants, 58(51%) were male, 56 (49%) were female and 72(63%) were depressed. Among depressed students, 30(52%) were male and 42(75%) were female (*p*= 0.01). Symptoms like perceived loss of fun in life was felt by 67% males and 71% females (*p* 0.02) and nervousness and tension were experienced by 62% males and 89% females (*p*<0.01).Suicidal thoughts were present in higher number of female students (32%) compared with males (17%), though this difference was not statistically significant.

Conclusion: Multi-center studies are required to establish the gender differential in depression among female and male medical students that was highlighted in the present study. Interventions like increased individual counseling for students, faculty education, and identification and management of depressed students need to be created in medical schools.

Keywords: Depression, suicidal ideation, medical students, male, female

INTRODUCTION

Depression is a mental disorder, characterized by sadness, loss of interest or pleasure, feelings of guilt, disturbed sleep or appetite, substantially impairing a person's ability to function at work or cope with daily life.In its most severe state, depression can lead to suicide[1].

The presence of depression is an important indicator to assess the mental health of a society. The greater the stress the more are the chances to develop depression. It is generally believed that the level of stress which a medical student faces is much higher as compared to students getting other types of educations.[2]The prevalence of depression and anxiety in the overall population of Pakistan is 34%.[3-4]It is documented worldwide that a very high percentage of medical students develop depression ranging from 10% to 64% depending on area and culture[5-9].

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Gender difference in depression amongst the medical students is quite variable. In Saudi Arabia the overall prevalence of anxiety and depression in the females is much higher (61%) than the males (44%), having almost same ratio during all years of medical training.[9]In contrast, the male students in Turkey had significantly high levels of depression as compared to females especially in the second year of medical graduation.[10]Results of a study conducted in Cambridge, United Kingdom, showed that only a small proportion of medical students have depression. It also negates the view that there exists a difference in prevalence of depression between men and women[11].

Depression in adolescents and young adults is gaining a lot of attention. This is becausedepression is common in age group 15-19 years,[12] with its victims being more females than males.[13] The most serious and important outcome of depression in this age group is suicidal ideation[14,15].

The main objective of our study was to assess the gender difference in frequency of depression and suicidal ideation in students in the initial years of medical study.

MATERIAL AND METHODS

A descriptive cross sectional study was conducted in July 2016, among second year medical students at Lahore Medical & Dental College (LMDC), Lahore. The study participants were screened for depression by using six items Kutcher Adolescent Depression Scale (KADS-6). Depressive symptoms assessed in KADS-6 are depicted below:

1. Low mood, Sadness, Apathy *(Item 1);*
2. Low self-esteem/worthlessness *(Item 2);*
3. Tiredness, fatigue, de-motivation *(Item 3);*
4. Lack of pleasure and fun in life *(Item 4);*
5. Panic, worry, nervousness, tension, anxiousness *(Item 5);*
6. Thoughts, plans or actions about suicide or self-harm *(Item 6);*

Depression was established if total score of KADS-6 was either 6 or more.

Data was entered, cleaned and analysed in SPSS version 22 and was presented in the form of tables and graph. Association of gender of participants with depression and suicidal ideation was ascertained by applying chi square test, with p≤0.05 as cut off point for statistical significance.

RESULTS

Out of 142 medical students in second year MBBS, 114 participated in the study (response rate= 80.3%). Among the study participants, 58(51%) were male and 56 (49%) were female. Depression was present in 72(63%) of study participants. Table 1 shows the distribution of male and female students according to depression.Depression was present in30(52%) of male and 42(75%) of female students. This difference was statistically significant (*p*= 0.01).

Table 2 presents the distribution of male and female students according to suicidal ideation. Suicidal thoughts were present in higher number of female students (32%) compared with males (17%), however his difference was not statistically significant (*p*= 0.07).

Figure 1 depicts the difference in depressive symptoms in students, which were comparatively higher in females than males. Low mood, sadness and feeling down were experienced by 72% male and 85% female students (*p* 0.08). Worthlessness and hopelessness were felt by 45% males and 63% females (*p* 0.23). Feelings of tiredness and fatigue were encountered by 78% males and 82% females (*p* 0.68). The statistically significant difference in males and females were seen in perceptions about loss of fun in life which was felt by 67% males and 71% females (*p* 0.02) and suffering from nervousness and tension experienced by 62% males and 89% females (*p*<0.01).

Table 1: Depression in medical students according to gender (n=114)

Gender	Depression	
	Absent	Present
Male(58)	28(*48.3%)*	30(*51.7%)*
Female (56)	14(*25%)*	42(*75%)*

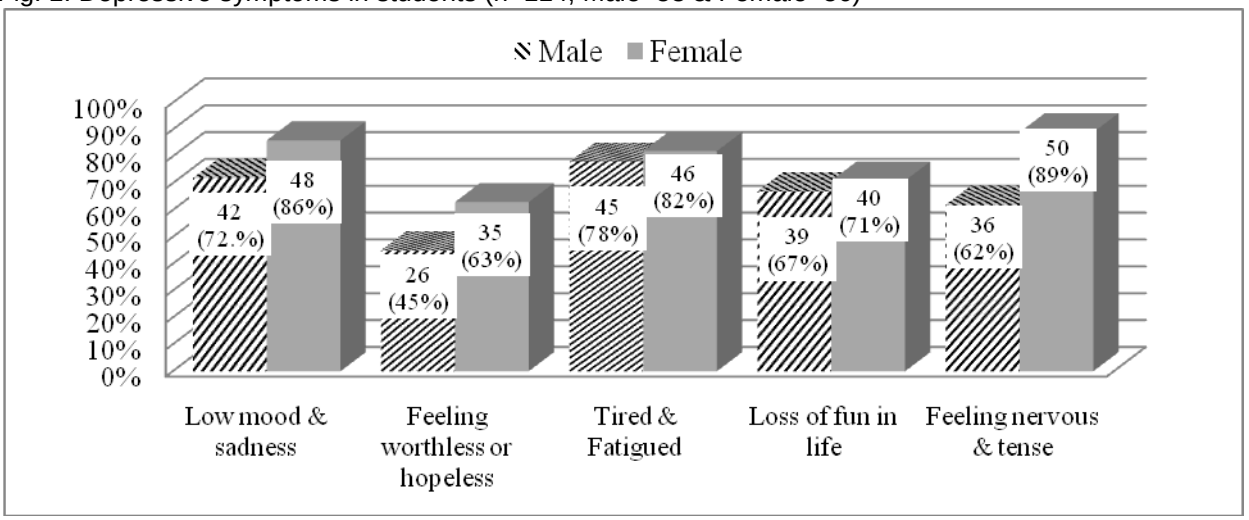
Chi Square (x^2) 6.634 Pvalue=0.01

Table 2: Suicidal thoughts in medical students according to gender (n=114)

Gender	Suicidal thoughts	
	Absent	Present
Male(58)	48(82.8%)	10(17.2%)
Female (56)	38(67.9%)	18(32.1%)

Chi Square (x^2) 3.414 Pvalue=0.07

Fig. 1: Depressive symptoms in students (n=114; Male=58 & Female=56)



DISCUSSION

The main purpose of our study was to establish gender difference in depression amongst the male and female students. In the present study, significantly higher number of females screened positive for depression than males (p=0.01). This finding was consistent with majority of researches in different parts of world. Bazmi (2007), reporting from Saudi Arabia, also found higher prevalence of depression in female medical students (61%) compared with the males (44%)[9]. In Canada based studies conducted by Dyrbe et. al (2006) and Afifi et al. (2005) reported higher preponderance of depression in adolescent females compared with their male counterparts[16,17], Greater rate of depression in female medical students was also reported from studies conducted in USA[18,19], Sweden[20], Brazil[18], Hawai[15], Iran[21], India[22] and Pakistan[23].

There could be several reasons why there is a greater number of female students experiencing depression than males. There is not much agreement among the researchers for precise causes of more depression in females except female hormonal changes.[24]However there are many social factors already studied in Pakistan which are thought to lead to more depression in female adolescents[25,26] In our society female medical students are absolutely dependent on their families. Majority of these female students do not have independence to go for recreational activities. If they ever find time it is only in the company of their family. Instead they are always busy in studies and exams. This makes them tired mentally and physically. And if there is any reason of failure in examsit acts as a major factor for development of depression.On the other hand, males, although economically dependent on their parents, they have full liberty for recreational activities. Hence, they hardly care of the result and find easy ways to get rid of any form of depression with much more ease. In addition poor social support may not only result in increases in depressive symptoms, but it might also result from feeling depressed[27] Sajjadi et al in a similar study in Iran has highlighted some more factors contributing to depression like poor inter-parental relationship, poor adolescent-parent relationship, low socio-economic status (SES), low level of parental education, and poor academic performance[28].

Considering suicide ideation the results of our study are quite alarming. Suicidal thoughts were present in higher number of female students (32%) compared with males (17%), however this difference was not statistically significant (p=0.07). Depression in adolescents is a major risk factor for suicide, the second-to-third leading cause of death in this age group, with more than half of adolescent suicide victims reported to have a depressive disorder at time of death. Depression also leads to serious social and educational impairments[12] Higher reports of suicidal ideation in female medical students was reported from USA[29,30] Iran[31] and Pakistan[32].

The main limitation of the study was that it was confined to one class of MBBS in a private sector medical college of Lahore.

CONCLUSION

In the present study, higher number of female medical students was screened positive for depression and suicidal ideation compared with male students. Further multi-center studies are requiredto establish this gender differential. Interventions like increased individual counseling for students, faculty education, and specialized confidential identification and management of depressed students need to be created in medical schools.

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