

Original Research Article

The prevalence of bipolar spectrum disorder in medical students of Pakistan

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ABSTRACT

Background: Bipolar affective disorder is cyclic swinging of mood between mania or hypo-mania and depression. Bipolar disorder is the sixth leading cause of disability worldwide and has a lifetime prevalence of about 1 to 3% in the general population. Despite a growing body of knowledge on bipolar spectrum disorder (BSD), relatively little is known about the clinical characteristics of BSD in medical students. This study evaluates the prevalence and severity of BSD in medical students in relation to certain socio-demographic factors like age, sex and class of education.

Methods: A questionnaire based study was done on 298 medical students of Nishtar Medical University, Multan and Shaikh Zayed Medical College, Rahim Yar Khan chosen on basis of random sampling to test the prevalence of bipolar spectrum disorders using Mood Disorder questionnaire (MDQ). Out of these students 161 were males and 137 were females. Students were interviewed to obtain information about age, sex and academic year of education.

Results: According to mood disorder questionnaire scoring, of the total 298 students 80 (26.84%) screened positive for bipolar spectrum disorder (BSD). Among 80 students who screened positive for BSD 43 (53.75%) are males while 37 (46.25%) are females. Class-wise distribution of BSD is as follows: Out of 80 students screened positive 15 (18.75%) are from 2nd year, 22 (27.5%) from 3rd year and 43 (53.75%) from 4th year. Age-wise distribution of BSD is as following: Students of age 19, 20, 21, 22 and 23 years suffering from BSD were 5 (6.25%), 17 (21.25%), 23 (28.75%), 22 (27.5%) and 13 (16.25%) respectively.

Conclusions: In our study, the estimated rate of prevalence for bipolar spectrum disorder among medical students of Pakistan is 26.84%. There was no significant difference in prevalence on the basis of gender. Prevalence was increasing with both age and class wise distribution.

Keywords: Bipolar, Depression, Euthymic, Stigma

INTRODUCTION

Bipolar Affective Disorder is cyclic swinging of mood between mania or hypo-mania and depression.¹ During mania, an individual behaves or feels abnormally energetic, happy, or irritable.² Individuals often make poorly thought out decisions with little regard to the consequences. The need for sleep is usually reduced

during manic phases.³ During periods of depression, there may be crying, a negative outlook on life, and poor eye contact with others.² Moreover, the depressive phases tend to be longer than the hypomanic and euthymic phases in patients with BSD.⁴ Thus, BSD is often under-referred, underdiagnosed, or misdiagnosed as another psychiatric disorder, such as unipolar depression.⁵ Bipolar disorder is also associated with significant

mortality risk, with approximately 25 percent of patients attempting suicide and 11 percent of patients completing.⁶ People with bipolar disorder often face problems with social stigma.² Other mental health issues such as anxiety disorders and substance use disorder are commonly associated with bipolar disorder.²

A numbers of risk factors are associated with bipolar disorders. These include age, sex, and genetic predisposition, environmental factors and socio-economic status. Epidemiological Catchment Area (ECA) study found 18 to 27 years of age as the median age for the onset for Bipolar Spectrum Disorder (BSD)⁷. Bipolar disorders manifest in both the genders equally with family history as a strong determining factor.⁷⁻¹⁰ Males have much earlier onset of disease as compared to females.

Recent advances in psychiatry have increased our understanding of bipolar spectrum disorders and have further characterized the nature of conditions such as bipolar II disorder, the soft form of bipolar disorder, cyclothymic disorder, depressive mixed state, and the so-called bipolar spectrum disorder (BSD).¹¹⁻¹⁵

The objective of this survey-based research is to determine the prevalence of vulnerability for bipolar spectrum disorder among the medical students of Pakistan. The waxing and waning mood of students due to bipolar disorder has an impact on their curricular and non-curricular activities and since there is little awareness among the student community regarding these mental disorders, this research aims to highlight the vulnerability for bipolar disorders in a population of students.

METHODS

A descriptive, cross-sectional study was carried out from September to December, 2018 at Nishtar Medical University, Multan and Shaikh Zayed Medical College, Rahim Yar Khan. Ethical issues were addressed according to institutional review boards. The class representatives were intimated before-hand about the time and place of conducting the session so that all those willing to participate could be assembled in the lecture theatre. All the participants were informed about the targets of the research, the methods of the study, and how to fill the questionnaire. All procedures were performed only with the consent of the participants, and all information was used solely for this research. Those who did not give their consent to participate were excluded. All the subjects were assisted by the researchers in the filling of their questionnaires at each step.

A questionnaire based study was done on 298 medical students chosen on basis of random sampling to test the prevalence of bipolar spectrum disorder using Mood Disorder Questionnaire (MDQ). Out of these students 161 were males and 137 were females. A complete history was taken from the subjects in relation to their

age, sex and academic year. A screening for chronic medical or psychiatric illnesses was performed during the interview. Students with known chronic medical illnesses or those who were taking drugs were excluded from the study.

Procedure and data analysis

Mood Disorder Questionnaire (MDQ) is a 5-item questionnaire with each consisting of 2 parameters showing the answer in form of yes or no. The five component scores are then added to yield a global MDQ score. The students were said to be positive for BSD if they were filling following criteria:

- “Yes” to seven or more of the 13 items in question number 1.
- “Yes” to question number 2.
- “Moderate” or “Serious” to question number 3.

All symptoms were evaluated on basis of these parameters. The data collected was entered and analysed on SPSS v.20.

RESULTS

Three hundred and ten (310) students were selected for the study and were asked to return the completed 5 items questionnaires. Two hundred and ninety-eight (298) students returned the questionnaires so the response rate was 96.12%. Out of 298 students, 161 (54.02%) were males and 137 (45.97%) were females. According to mood disorder questionnaire scoring, of the total 298 students 80 (26.84%) screened positive for bipolar spectrum disorder (BSD). Among 80 students who screened positive for BSD 43 (53.75%) are males while 37 (46.25%) are females (Figure 1). 15 (18.75%) students with a positive screening result for MDQ reported a previous health professional diagnosis for manic-depressive illness while 65 (81.25%) students with a positive screening denied any such diagnosis.

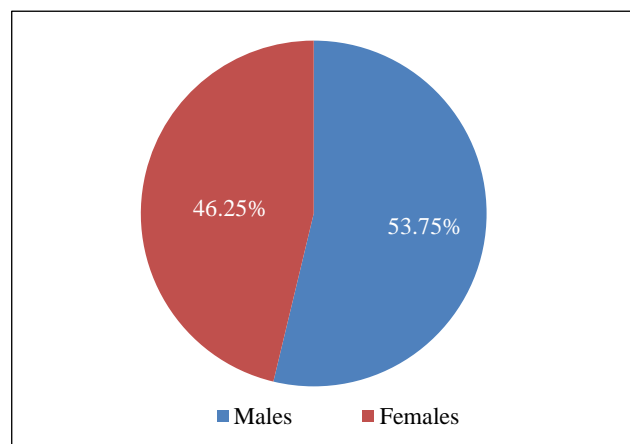


Figure 1: Gender wise distribution of bipolar spectrum disorder.

Class-wise distribution of BSD is as follows: Out of 80 students screened positive 15 (18.75%) are from 2nd year, 22 (27.5%) from 3rd year and 43 (53.75%) from 4th year (Figure 2).

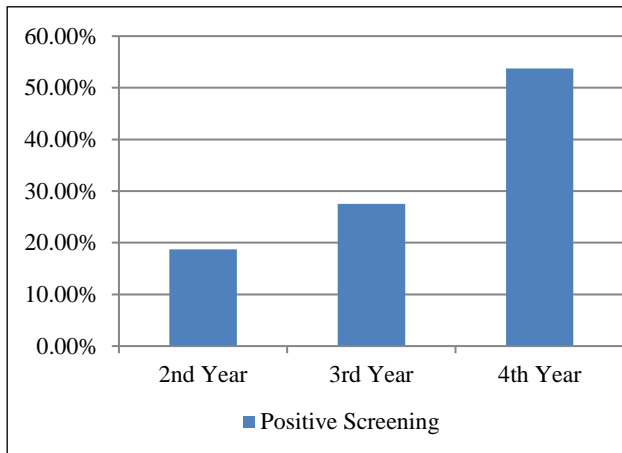


Figure 2: Class wise distribution of bipolar spectrum disorder.

Age-wise distribution of BSD is as following: The students of age ranging between 19 to 23 years were selected for the study. Students of age 19, 20, 21, 22 and 23 years suffering from BSD were 5 (6.25%), 17 (21.25%), 23 (28.75%), 22 (27.5%) and 13 (16.25%) respectively (Table 1).

Table 1: Age-wise distribution of bipolar spectrum disorder.

Age (Years)	Positively screened students(n=80)	Percentage of positively screened students (%)
19	05	6.25
20	17	21.25
21	23	28.75
22	22	27.25
23	13	16.25

DISCUSSION

The present study has assessed the medical students of Nishtar Medical University Multan and Shaikh Zayed Medical College, Rahim Yar Khan and found that about 26.84% of the sample population was screened positive for bipolar spectrum disorders. The prevalence of BSD in this study was significantly higher as compared to other parallel cross-sectional studies.¹⁶⁻¹⁸ This variation is probably due to either difference in sample population or socio economic culture or both. Moreover, the difference between the prevalence of bipolar spectrum disorders among medical students from all over the world may be due to different curriculum, studying methodology, working hours, lifestyle as well as extra-curricular activities.

A slightly higher prevalence rate was found among males as compared to females (53.75% vs. 46.25%) which was statistically insignificant and confirm the equal prevalence of bipolar disorders as reported in other studies.¹⁹ The most affected age group of BSD was found to be 21-22years of age and this was in congruence with the various past demographic studies indicating the onset of symptoms at an early adult stage.^{1,8,20} Various factors could be responsible for this trend like promotion of study year, increase in the number of subjects, skills and clinical rotations.

The scoring of class-wise answers to each questions of Mood Disorder Questionnaire showed that the frequency and severity of bipolar spectrum diseases increases side by side with promotion in higher classes. Fourth and final year students tend to be more affected by different psychological conditions like BSD than their junior peers. This may be due to increase in number of different subjects and clinical postings etc. which increase the burden of work on students leading to alternating states of mania and depression.^{21,22}

Out of those who were screened positive for BSD only 31.5% were found to have had an initial health professional diagnosis for manic-depressive illness. This is clinically significant as many of the cases are still undiagnosed which can lead to worse clinical, educational and social outcomes for such patients.²³ WHO in one of its surveys has already pointed towards the iceberg for such manic depressive illnesses.¹

The results of this study would help the professionals dealing with bipolar spectrum disorders to develop evidence based prevention and management guidelines for the students who are at risk or with bipolar spectrum disorders. This study would be a baseline for researchers. It also provide statistical as well as clinical data to health planners and policy makers for the betterment of the society.

CONCLUSION

To conclude, 1 out of every 5 students was screened positive for BSD. Demographic comparison showed that the prevalence and severity of BSD was irrespective of gender but, it was increasing along with increasing age and class status. This study is limited only to the positive screening for bipolar disorders and not the actual diagnosis because the data collecting tool (MDQ) used for this study has its significance only in the rough estimation of BSD. Since, the students were the only subjects of the study, their stressful mental status at the time of filling the questionnaire could have had an impact on prevalence rate of positive screens. Moreover, our study used self-report questionnaires, such as the MDQ; thus, considerable self-report bias may have influenced the results. So, we recommend further studies with larger sample size, diverse source population, variety of means of measuring academic performance, and different study

design, to overcome majority of the limitations of this study.

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