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AN ASSESSMENT OF THE KNOWLEDGE AND AWARENESS REGARDING BIPOLAR DISORDER AMONGST UNIVERSITY STUDENTS IN PAKISTAN

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ABSTRACT
Background: Bipolar disorder is a multivariate illness that causes periods of depression or abnormally elevated mood and is one of the leading causes of disability worldwide. It affects 6% of the adult population when the complete spectrum of the disease is taken into consideration. Bipolar subjects were found to have clinically significant depression 32% of the time, manic symptoms 9% of the time and presented with both 6% of the time **Objective:** Assess the knowledge and awareness regarding bipolar disorder in university going students of Pakistan. **Method:** A cross sectional study was conducted from May 2018 to August 2018, in major universities across Pakistan. Non-probability, convenient sampling was used to collect data from 390 university students. Data collection was carried out using a structured questionnaire and informed consent was taken prior to the commencement of the survey which consisted of two sections, namely, demographics and bipolar disorder questions. Results: In total, 390 university students took part in this study. 79.2% of the students knew that bipolar disorder is a medical illness and 89.8% of the students knew that both mania and depression are components of bipolar disorder. Furthermore, 75.4% of the students considered counselling as a viable option of management and treatment for bipolar disorder.

KEYWORDS: Bipolar disorder, Mania, Depression, Mood Disorder.

INTRODUCTION
"Bipolar disorder, also known as manic depression, is a mental illness that brings severe high and low moods and changes in sleep, energy, thinking, and behavior".[1] The Diagnostic and Statistical Manual of Mental Disorders currently lists five types: bipolar I, bipolar II, cyclothymic disorder, other specified bipolar and related disorders, and unspecified bipolar and related disorders. Bipolar I disorder comprises of manic episodes which last for 7 days or more, or severe mania that needs hospitalization. The patient may also suffer from a major depressive episode that lasts 2 weeks or more. Bipolar II disorder features both mania and depression, but the mania is not as severe as in bipolar I, and is referred to as hypomania. Cyclothymic disorder includes episodes of hypomania and depression lasting for 2 years or more in adults and 1 year in children.[2]

Bipolar disorder affects 6% of the adult population when the complete spectrum of the disease is taken into consideration.[3] Patients were found to have clinically significant depression 32% of the time, manic symptoms 9% of the time and presented with both 6% of the time.[4] Anxiety, irritability, and agitation are common indicators of bipolar I disorder.[5] which may help physicians in identifying this disease. Patients suffering from bipolar disorders have a shorter lifespan than those who are not, owing to suicide, accidents, and cardiovascular events amongst other causes.[6] Suicide is one of the leading causes of death with approximately 800,000 casualties per year worldwide,[7] which is of great relevance to our study as 10% of these deaths can be attributed towards bipolar patients.[8] Bipolar disorder also causes significant morbidity and decrement in the quality of life. Several studies confirm that most patients suffering from bipolar disorder show neurocognitive impairment, even during remission.[9]

Pakistan is considered to be a low-middle income country and the fact that less than 10% of the affected receive medical care.[10] is worrisome. Suicidal tendencies have not been given appropriate attention due to cultural limitations and an inherent lack of research on bipolar disorder. The primary objective of our study is to assess the knowledge and attitude of university students in Pakistan towards bipolar disorder. This will help lay the much-required groundwork for further studies to be carried out on bipolar disorder and will enable us to

make an impact on mental health which has been frequently neglected in the past.

METHODOLOGY

A cross-sectional study was conducted amongst university students in major cities across Pakistan. Informed written consent was taken from all those taking part in this study. Currently enrolled university students across Pakistan were considered to be a part of the study. International students who had not completed high school in Pakistan, students who did not give consent and those not willing to participate were excluded.

Questionnaires were distributed amongst students and online forms were sent to various universities in an attempt to minimize inclusion bias. The questionnaire included details of gender, age, and year of study of the students as well as the university they were enrolled in. However, names of the participants were kept confidential and were not included therefore reducing response bias to make this study more reliable. The questionnaire consisted of 3 core parts.

The first part comprised of questions to check knowledge and attitude towards depression as a clinical disorder. The second part had questions to check knowledge and attitude regarding mania. Lastly, a section related to questions about bipolar disorder and if counselling was a viable option for management and treatment of this disorder were asked.

Convenience sampling technique was employed, and the data collection was completed over a period of 4 months, from May 2018 – August 2018. The sample size was determined using the formula for unknown population size. In order to grasp a conclusive result a confidence level of 95% with an error rate of 5% was selected. The calculated sample size was 385 and a total of 405 responses were recorded keeping in mind nonresponses and errors by the participants while filling the survey.

Data was entered and analysed using SPSS version 24.0. Mean ± Standard Deviation (SD) or Median (Inter Quartile Range, IQR) were computed for all quantitative variables where appropriate. All the categorical variables were presented as frequencies and percentages. Based on normality of data appropriate hypothesis testing was conducted i.e., Chi square test for categorical variable and T-test for continuous variables. Where the data set was not normally distributed non-parametric tests were conducted. Lastly, regression and correlation were established based on appropriate variables and confounding was checked for using multiple regression.

RESULTS

The data was collected from 390 individuals out of whom 71.8% were female whilst 28.2% were male respondents. 334 (85.6%) medical and 56 (14.4%) non-medical responses were obtained. The mean age of the participants was 21±1.8. Majority of the interviewees agreed that depression is a clinical disorder (85.6%), with multiple presentations (95.1%) but most were unaware about the types of clinical depression (67.2%). A big part of the sample population knew what bipolar disorder is (82.2%) and that both, mania and depression, are components of it (89.8%). (Table 1).

Table 1: Bipolar disorder.

Variables		**Mean (SD)**	
Age		21.0 (1.8)	
		Frequency (n)	**Percentage (%)**
Gender	Female	280	71.8
	Male	110	28.2
Field of Education	Medical	334	85.6
	Non-medical	56	14.4
Knowledge of Depression	It is a clinical disorder	334	85.6
	It has multiple presentations	371	95.1
	Types of depression unknown	262	67.2
	Individual should seek medical advice	384	98.5
	Considered it to be treatable	348	89.2
	Caused by straying away from religion	195	50.0
Knowledge of Bipolar Disorder	Mania and depression are components of bipolar disorder	344	88.2
	Did not know types of bipolar disorder	202	51.8
	Considered not to be gender specific	222	56.9
	Considered the cause to be genetic and	273	70.0
	Considered therapeutic intervention	301	77.2
	Considered counselling a treatment	294	75.4
Considered the following to be a symptom of bipolar disorder	Sluggishness	226	57.9
	Irritability	329	84.4
	Hopelessness	318	81.5
	Insomnia	301	77.2
	Anxiety	322	82.6

Depression was identified as a clinical disorder predominantly by the medical students among the sample (P = 0.000). Furthermore, depression was considered to be a treatable disorder by a large part of those interviewed (89.5%) and this agreement was not affected by being from a medical program or not (P = 0.091).

Overall analysis of our data showed that half of the respondents (50%) think that straying away from religion can be a contributing factor towards depression and there was no significant association between this knowledge and the program that the respondents were enrolled in (P = 1.000).

Isolation of people suffering from mania was disagreed upon by most of the respondents (85.8%), and being a medical or non-medical student did not have a significant impact on the response (P = 0.053).

When we analysed the views of the interviewees about whether people suffering from bipolar disorder are responsible for their condition, majority (87.2%) of the sample disagreed. Medical and non-medical students had similar opinions in this regard (P = 1.000). A summary of the findings is illustrated in table 2.

Table 2: Bipolar disorder.

Question/statement	Most common response	Frequency (n)	Percentage (%)	Chi-square test		Risk Estimate	
				p-value	OR	95% CI - Lower limit	95% CI - Upper limit
Do you think depression is a clinical disorder?	Yes	334	85.6	0.000	1.432	1.165	1.76
Do you think depression has multiple presentations?	Yes	371	95.1	0.744*	1.006	0.941	1.075
How many types of depression are there?	Do not know	262	67.2	0.383	N/A	N/A	N/A
Someone showing symptoms of depression should seek medical advice	Agree	384	98.5	0.041*	1.047	0.983	1.115
Depression is a treatable disorder	Agree	348	89.5	0.054	1.104	0.973	1.253
Staying away from religion can be a contributing factor towards depression	Agree/Disagree	195/195	50.0/50.0	1.000	1.000	0.754	1.327
Which one of the following is not a symptom of depression?	Fever	337	86.6	0.728	N/A	N/A	N/A
Which of the following is not a symptom of mania?	Projectile vomiting	310	80.9	0.061	N/A	N/A	N/A
People suffering from mania should be isolated	Disagree	335	87.2	0.031	0.891	0.832	0.954
Which of the following are components of bipolar disorder?	Both depression and mania	344	89.8	0.263	N/A	N/A	N/A
How many types of bipolar disorder are there?	Do not know	202	52.7	0.018	N/A	N/A	N/A
Sluggishness is a symptom	Yes	226	57.9	0.002	1.555	1.110	2.177
Irritability is a symptom	Yes	329	84.4	0.130	1.178	0.999	1.388
Hopelessness is a symptom	Yes	318	81.5	0.173	1.102	0.940	1.292
Insomnia is a symptom	Yes	301	77.2	0.000	1.460	1.148	1.858
Anxiety is a symptom	Yes	322	82.6	0.046	1.149	0.974	1.355
Nausea is a symptom	No	336	86.2	0.753	0.982	0.881	1.094
Projectile vomiting is a symptom	No	369	94.6	0.751*	0.978	0.924	1.035
Rash is a symptom	No	382	97.9	0.608*	0.976	0.960	0.993
Diarrhea is a symptom	No	364	93.3	0.777*	1.006	0.930	1.088
Fever is a symptom	No	367	94.1	0.009*	1.114	0.999	1.243
Which of the following are the causes of bipolar disorder?	Both environmental and genetic	273	70.0	0.103	N/A	N/A	N/A
People suffering from bipolar disorder are responsible for their condition.	Disagree	340	87.2	0.938	0.996	0.894	1.108
Which gender is more likely to develop bipolar disorder?	Equally likely	222	56.9	0.008	N/A	N/A	N/A

Do you know what counselling is?	Yes	356	91.3				
Counselling helps in bipolar disorder (Skip if you answered NO in previous question)	Agree	294	75.4				
What percentage of the population is affected by bipolar disorder?	10.00%	100	26.4				
Patients with bipolar disorder should be monitored continuously	Agree	311	81.6				
Ethnicity has a correlation with bipolar disorder.	Disagree	264	69.7				

*Fischer's Exact test p-value
OR: Odd's ratio

DISCUSSION

This study is the first survey of knowledge and attitude towards bipolar disorder among university students in Pakistan. Among our sample population, 85.2% acknowledged depression as a clinical disorder. Mania was correctly identified by 74.7% of our respondents while 82.1% were aware of the definition of bipolar disorder.

Our sample population, despite knowing that depression is a clinical disorder, was largely unaware of the different types of depression. Pakistan, being a country where a major proportion of the population is religiously conservative, has issues with conflation of depression with agnostic attitudes. This is also reflected in studies conducted in other countries like Saudi Arabia with similar cultural and religious norms.[11] A popular opinion evident from our sample was that straying away from religion significantly contributes to depression. However, the majority of our respondents agreed that depression is a treatable disorder with a set course of treatment. The fact that people are aware about counselling yet do not consider it to be a viable treatment is worrisome. Hence, we concur that people's knowledge about counselling is inconsequential due to the strong religious beliefs prevalent in the society about this disorder as mentioned above.

The line of questioning about bipolar disorder was aimed at trying to see how well informed and empathetic the sample population was to the varied presentations of bipolar disorder. Awareness regarding the classification of bipolar disorder was sub-par with more than half (52.8%) of the respondents being unaware that the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) classifies bipolar disorder into five types. There is also a significant awareness about the multivariate nature of the causation of bipolar disorder. This recognition of mental disorders is extremely limited in comparison to western countries like Scotland.[12] It is surprising to have a significant proportion of this particular sample population believe that people suffering from bipolar disorders are responsible for their condition. This trend is highly concerning considering the fact that this small sample represents the academically qualified proportion of Pakistan's population, and is directly linked with the practice of sending patients to faith healers in low-income countries like Kenya.[13]

We also inquired about gender and ethnic factors determining what a patient with bipolar disorder generally looks like. The responders did not exhibit a favourable grasp of the fact that the likeliness of bipolar disorder does not fall equally along the gender spectrum. The sample population was also unable to significantly point out ethnic groups more likely to be affected by bipolar disorder.

CONCLUSION

Our study was successful in gauging the attitude and awareness of university students in Pakistan towards bipolar disorder. Our results showed that there are cultural and religious factors dictating attitudes regarding bipolar disorder. Although most of the sample recognized bipolar disorder as a mental illness, the views on its causation and treatment options were worrisome. This study will help researchers in assessing the attitude of the age group covered by our sample and compare them to the much larger older age group. Further qualitative and clinical research needs to be conducted to form a firm understanding of the interaction between sociocultural norms and diagnosis and care of people suffering from bipolar disorder.

REFERENCES

1. WebMD Web site. [Online].; 2020. Available from: https://www.webmd.com/bipolar-disorder/mental-health-bipolar-disorder.
2. Leonard J. Medical News Today. [Online], 2019. Available from: https://www.medicalnewstoday.com /articles/324437.
3. Findling RL, Chang KD. Improving the Diagnosis and Treatment of Pediatric Bipolar Disorder. The Journal of Clinical Psychiatry, 2018 March; 79(2).
4. Selvakumar N, Menon V, Kattimani S. A Cross-sectional Analysis of Patterns and Predictors of Medication Adherence in Bipolar Disorder: Single Center Experience from South India. Clinical Psychopharmacology and Neuroscience, 2018 May; 16(2): 168-175.

5. Suppes T, Eberhard J, Lemming O, Young AH, McIntyre RS. Anxiety, irritability, and agitation as indicators of bipolar mania with depressive symptoms: a post hoc analysis of two clinical trials. International Journal of Bipolar Disorders, 2017 Nov; 36.
6. Iwagami MI, Mansfield KE, Hayes JF, Walters K, Osborn DP, Smeeth L, et al. Severe mental illness and chronic kidney disease: a cross-sectional study in the United Kingdom. Clinical Epidemiology, 2018 April; 10: 421–429.
7. Nock MK, Borges G, Bromet EJ, Cha CB, Kessler RC, Lee S. Suicide and suicidal behavior. Epidemiologic Reviews, 2008 October; 30(1): 133-154.
8. Chen YY, Lee MB, Chang CM, Liao SC. Methods of suicide in different psychiatric diagnostic groups. Journal of affective disorders, 2009 November; 118(1): 196-200.
9. Solé B, Jiménez E, Torrent C, Reinares M, Bonnin CDM, Torres I, et al. Cognitive Impairment in Bipolar Disorder: Treatment and Prevention Strategies. The International Journal of Neuropsychopharmacology, 2017 August; 20(8): 670-680.
10. Fekadu A, Hanlon C, Thornicroft G, Lund C, Kaaya S, Alem A, et al. Care for bipolar disorder in LMICs needs evidence from local settings. The Lancet Psychiatry, 2015 September; 2(9): 772-773.
11. Alosaimi FD, AlAteeq DA, Hussain SIB, Alhenaki RS, Salamah AAB, AlModihesh NA. Public Awareness, Beliefs, And Attitudes Toward Bipolar Disorder In Saudi Arabia. Neuropsychiatric Disease and Treatment, 2019 September; 15: 2809–2818.
12. Griffiths KM, Nakane Y, Christensen H, Yoshioka K, Jorm AF, Nakane H. Stigma in response to mental disorders: a comparison of Australia and Japan. BMC Psychiatry, 2006 May; 6(21).
13. Musyimi CW, Mutiso VN, Nandoya ES, Ndetei DM. Forming a joint dialogue among faith healers, traditional healers and formal health workers in mental health in a Kenyan setting: towards common grounds. Journal of Ethnobiology and Ethnomedicine, 2016 January; 12(4).