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A study comparing socio-demographic and clinical profile of patients of unipolar and bipolar depression

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Abstract
Background: Depression can be classified into Unipolar and bipolar depression on basis of the presence or absence of manic, hypomanic, or mixed episodes in past. Studies have revealed significant differences between bipolar (BD) and unipolar depression (UD). Misdiagnosing BD results in suboptimal symptom resolution, induction of manic switch, mixed state, or accelerated cycling. This study compares various socio-demographic,and phenomenological factors associated with BD and UD. **Materials and Methods:** We compared 30 UD and 30 BD patients using a socio-demographic proforma, International Classification of Diseases 10 diagnostic criteria for research, Hamilton Rating Scale for Depression17 (HAMD17), Hypomania Checklist32 Questionnaire (HCL-32), Brief psychiatric rating scale (BPRS), and Kuppuswami's socioeconomic status scale. **Results and conclusion:** Statistically significant difference found between UD and BD group in auditory hallucinations, FRS [First rank Symptoms], delusions, panic symptoms and cognitive symptoms of depression. Binary logistic regression analysis identified the age of onset, the total duration of illness, no of episodes, and presence of delusions as predictors of bipolarity (odds ratio = 1.3; 0.92; 1.17; 4.7). Depressive episode of BD are more disabling as compared to those with UD. With the emergence of bipolar depression it becomes paramount not to miss bipolarity with first episode depression
Keywords: bipolar, unipolar, depression.

Introduction

With an estimated global burden of 350 million people across the world, [1] The depressive disorders are considered as one of the major worldwide public health problems, in terms of its prevalence, suffering, dysfunction, morbidity, and economic burden[2]. Being the leading cause of disability for both male and female, the burden of depression is 50% higher for female than male (WHO, 2008). The World Mental Health Survey conducted in 17 countries found that on average about 1 in 20 people reported having an episode of depression in the previous year. Depressive disorders often start at a young age, are recurring and significantly reduced productivity of the individual. In general, about 20% of youth develop impairing unipolar depression that substantially increases the risk for suicidality and interfare their normal development[3]. For these reasons, depression is the leading cause of disability worldwide in terms of total years lost due to disability. The demand for curbing mental health conditions is on the rise globally including depression. A recent World Health Assembly called on the World Health Organization and its member states to take action in this direction [1].
Depression is a common mental disorder characterized by chronic and relapsing course and variable prognosis that negatively affects how you feel, the way you think and how you act and that presents with depressed mood, loss of interest or pleasure, decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration. Moreover, depression often comes with

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symptoms of anxiety. These problems can become chronic or recurrent and lead to substantial impairments in an individual's ability to take care of his or her everyday responsibilities. At its worst, depression can lead to suicide. Almost 1 million lives are lost yearly due to suicide, which translates to 3000 suicide deaths every day. For every person who completes a suicide, 20 or more may attempt to end their life (WHO, 2012)[1].Depression can be classified into Unipolar and bipolar depression on basis of the presence or absence of manic, hypomanic, or mixed episodes in past. Patients with current episode mild or moderate depression without/with the somatic syndrome and severe depression without/with psychotic symptoms with at least one hypomanic, manic, mixed episode in the past diagnosed as Bipolar depression (BD)[1,2]. while who meet the criteria for Recurrent depressive disorder [RDD]-current episode moderate depression without/with the somatic syndrome and severe depression without/with psychotic symptoms without any history of hypomania, mania, or mixed episode are diagnosed as Unipolar depression (UD).
Unipolar and bipolar disorders differ in genetics, neurobiology, clinical course, treatment regimens, and prognosis[4,5]. Bipolar disorder affect around 29.5 million individuals worldwide in 2004, according to the World Health Organization[6]. Several studies have shown that up to 60% of adult Bipolar patients have the onset of illness before age 21, and early-onset BD may be a particularly severe form of the illness. Majority of bipolar depression are misdiagnosed as unipolar depression due to the absence of biologically relevant diagnostic markers resorting to misdiagnosis and false treatment. Other reasons for misdiagnosis are similar phenomenology for BD and UD, failure of therapists to recognize previous hypomanic symptoms, and failure of patients to report them. Thus, improving the characterization of the clinical picture of BD is very important and

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can potentially help improve differential diagnosis and early identification. The differential diagnosis between unipolar and bipolar depression has important clinical and research implications. For example, monotherapy with antidepressants is indicated for the treatment of unipolar depression, but they may exacerbate or induce mania or mixed episodes in Bipolar depression thus altering course and prognosis[7]. Depressive episodes with sudden onset, psychomotor retardation, diurnal mood variation, worthlessness, anhedonia, pathological guilt, suicidal thoughts, psychotic symptoms, atypical features, and labile mood are important markers for bipolarity. Unipolar depression is characterized by excessive self-reproach, somatic complaints, more severe appetite, and weight loss, loss of energy, and diminished libido. Several studies have focused on longitudinal course factors such as age, gender, age of onset, duration of the episode, and comorbidities (substance use, suicide, anxiety disorders), family loading of bipolarity, affective temperament, frequent job changes, marital discord, and hospitalization rates[8-11].Differential course, prognosis and management of unipolar and bipolar depression, necessitate study comparing the clinical profile among these patients. The current research work is an attempt to throw light on this subject.

Material and method

This is a cross-sectional, observational study conducted in Psychiatry O.P.D. of tertiary care Hospital. The sample consisted cohort of 30 outpatients with unipolar depression (UD) and 30 outpatients with bipolar depression (BD) diagnosed by the ICD-10 classification of mental and behavioral disorders: Diagnostic criteria for research and assessed independently by two senior psychiatrists not directly involved in the study. The study was approved by the Institutional Ethical Committee. The patients, who signed written informed consent, participated in this study. Patients aged 18-65 years, both genders, who satisfied the ICD 10 criteria for either BPAD (F31) or recurrent depressive disorder (F33), moderate depression with/without somatic symptoms and severe depression with/without psychotic symptoms and were off medications at least 2 weeks before the onset of the current episode were included in this study. The subjects with a history of mental retardation, seizure disorder, permanent neurological deficits, cognitive impairment, and affective illness secondary to a general medical condition or psychoactive substance use were excluded along with the patients whose informants were unable to provide adequate information. Identifying information, socio-demographic data, and clinical variables were recorded for each patient. The following scales were applied:

1. Socio-demographic profile performa

Includes name, age, sex, father's /husband's name, address, religion, place, marital status, education, occupation, type of family, informant details, and socioeconomic status.

Results

30 UD patients were compared with 30 BD patients and the results were analyzed.

2. Kuppuswami's socioeconomic status scale[12]

Takes account of education, occupation and income of the family to classify study groups into high, middle, and low socioeconomic status. The income scores require modification using All India Average Consumer Price Index for Industrial Workers.

3. Clinical profile

Clinical profile performa

This included a detailed history of the psychiatric illness & mental status examination comprising age of onset, total duration, previous episodes, hospitalizations, substance abuse/dependence, deliberate self-harm, postpartum/ perimenstrual behavioral disturbances, history of electroconvulsive therapy, and family history of psychiatric illness in first and second-degree relatives.

The Hamilton Rating Scale for Depression17 item[13] (HAMD)

The Hamilton Rating Scale for Depression (HAM-D) is the most widely used clinician-rated scale for the assessment of depression severity in patients who were already diagnosed with a depressive disorder[14]. The scale is widely available and has two common versions with either 17 or 21 items and is scored between 0 and 4 points. Scoring is based on the 17-item scale and scores of 0–7 are considered as being normal, 8–13 suggest mild depression, 14–18 moderate depression, 19-22 severe depression, and scores over 23 are indicative of severe depression[15].

The Hypomania Checklist 32 Questionnaire[16] (HCL-32)

The Hypomania Checklist-32 Questionnaire (HCL-32) is developed by Jules Angst and Thomas Myer for assessing a life-time history of hypomanic symptoms. Individuals with a total score of ≥14 are potentially BD. The HCL-32 screens for a history of hypomanic symptoms using thirty-two yes/no items and takes into account the subject's current mental state.

The Brief psychiatric rating scale[17] (BPRS)

BPRS developed by Overall and Gorham is a relatively brief scale that measures major psychotic and non- psychotic symptoms in major psychiatric disorders. Five of the items (tension, emotional withdrawal, mannerisms and posturing, motor retardation, and uncooperativeness) are based on observations of the patient. The remaining 13 items are based on the patient's verbal report. Items are rated on a 7-point Likert scale, from 1 = "not present" to 7 = "extremely severe", with scores ranging from 18 to 126 (achieved through summing the item scores).

Statistics

Descriptive statistics for means, Independent t-test for comparison and logistic regression analysis for strength of association

Table 1: Socio-demographic profile of unipolar and bipolar group

Variables	Mean (SD) / n (%)		Test statistics	P value
	Unipolar	Bipolar		
Age	43.46 (6.7)	41.40 (5.1)	t-test t score = 1.34	0.36
Gender Male Female	9 (30) 21 (70)	19 (63) 11 (37)	X2=6.69	0.01*
Education Illitrate Primary Secondary Sr. Secondary Higher	11 (36.7) 7 (23.3) 2 (6.7) 5 (16.7) 5 (16.7)	12 (40) 8 (26.7) 7 (23.3) 2 (6.7) 1 (3.3)	X2=6.8	0.145
Marital Status Unmarried Married	2 (6.70) 28 (93.30)	4 (13.30) 26 (86.70)	X2=0.74	0.38
Type of family Nuclear Joint	16 (53.3) 14 (46.7)	19 (63.3) 11 (36.7)	X2=0.61	0.42

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Religion Hindu Muslim	25 (83.3) 5 (16.7)	23 (76.7) 7 (23.3)	X2=0.41	0.51
Employment Unemployed Employed Previously employed	11 (36.7) 14 (46.7) 5 (16.7)	2 (6.7) 20 (66.7) 8 (26.7)	X2=7.9	0.014*
Socio-economic class Lower Upper lower Lower middle Upper middle	0 9 (30) 12 (40) 9 (30)	1 (3.3) 13 (43.3) 11 (36.7) 5 (16.7)	X2=2.9	0.40

On analysing the age of the study participants, the mean age of the subjects with UD was 43.46 [SD 6.76] and for BD patients it was 41.4 [SD 5.16] [p>0.05]. In our research, 30% of the patients with UD were male and the rest 70% were females. Among BD, 63.3% of patients were males [p=0.01]. Among UD patients, 46.7% were employed and among BD, 66.7 were employed. The difference was statistically significant [p=0.014].

Table 2: **Clinical profile in unipolar and bipolar group**

S.No	Characteristic present	UD N [%]	BD N [%]	Test statistic	P-value
1	Auditory hallucination	7 [23.3]	17 [56.7]	6.9	**0.008**
2	FRS	1 [3.3]	8 [26.7]	6.4	**0.01**
3	Delusions	10 [33.3]	24 [80]	13.3	**0.00**
4	Panic symptoms	8 [26.7]	15 [50]	3.4	**0.06**
5	Dissociative features	3 [10]	2 [6.7]	0.2	0.6
6	Pseudo-dementia	5 [16.7]	3 [10]	0.5	0.44
7	Anhedonia	21 [70]	22 [73.3]	0.08	0.77
8.	Suicidal thoughts	24 [80]	25 [83.3]	0.11	0.78
9.	Catatonic feature	2 [6.7]	7[23.3]	3.2	0.07
10.	Depressive cognition	26 [86.7]	30 [100]	4.2	**0.03**

We compared the clinical symptoms between UD and BD patients. We found a statistically significant difference in auditory hallucinations, FRS [First rank Symptoms], delusions, panic symptoms and cognitive symptoms of depression. More percentage of BD patients presented with these symptoms than UD patients, 56%, 26%, 80%, 50% and 100 %, respectively.

Table 3: Logistic regression analysis

Variable	B	SE	P	OR	R^2	CI
No.Of hospitalization	-1.18	0.511	**0.02**	0.30	0.567	0.113-0.833
Age of onset	0.264	0.088	**0.03**	1.3		1.1-1.5
Duration	-0.076	0.069	0.27	0.92		0.8-1.0
No. Of episodes	0.157	0.367	0.669	1.17		0.57-2.4
FRS	1.92	1.17	0.1	6.8	0.364	0.69-67
Auditory hallucinations	0.86	0.66	0.19	2.3		0.64-8.6
Delusions	1.55	0.65	**0.01**	4.7		1.3-17.1

In regression analysis, we found the age of onset [1.3 odds ratio] and delusions [4.7 odds ratio], to be statistically significantly associated with UD. This means a person with the age of onset more than 40 years have a 1.3 odds higher chances of developing UD than BD. Similarly, a person with delusions has 4.7 higher odds of developing UD than BD. No. Of hospitalisations were negatively associated with the development of Depression [p<0.05].

Discussion

The mean age of the subjects with UD[43.46 (SD 6.76)] was greater than for BD [41.4 (SD 5.16)] although the difference was statistically insignificant. Participants in the unipolar group were younger than those in the bipolar group (P = 0.035) in the study by Georgina M et al[18] and the difference was statistically significant. There was male preponderance in bipolar depression (3:1) and female preponderance in unipolar depression(3.5:1). In the research by Bruschi,A et al[19]Bipolar depression patients gender ratio was 55M/69F and in unipolar depression there was more woman (17M/46F). In the study by Nisha A et al[20] also 56.7% of the total sample consisted of females –73.3% of UD [Unipolar] group versus 40% of the BD [Bipolar] group (P = 0.009). While in previous researches the gender ratio in unipolar depression was 2:1 with female preponderance and 1:1 in bipolar depression. The difference is due to differences in methodologies of different studies. In our study we have taken most of the patients from OPD, and the general population cases also were excluded so milder cases were less recruited. Among UD patients, 46.7% were employed and among BD, 66.7 % were employed, this was because most of the patients in UD were females most of whom were housewives & in BD more were male. The difference was statistically significant [X^2= 7.9, p=0.014]. Similarly 330 patients in the study by Kalita K N etal[21], 141 were employed and they had more likelihood of having bipolar depression (57.4%). Also in the study by Nisha, A et al[20] BD group consisted of manual labourers and other skilled workers, while housewives and skilled workers predominated the UD group. There were no significant group differences in age, sex, race/ethnicity, marital status, educational attainment, or household income. The findings from our study suggest that bipolar disorders are more prevalent in lower socio-economic status population, although causality whether lower socio-economic status is a risk factor for BD couldn't be established.

While comparing clinical profile of the patients in both groups we found that First rank symptoms, auditory hallucinations, delusion and panic attacks were more common in BD as compare to UD and this was statistically significant but on regression analysis only delusions [4.7 odds ratio] were found to be significant with bipolar depression group. We found auditory hallucinations to be significantly associated with BD. Second person auditory hallucination was the most common perceptual abnormality elicited (33.3% of BD group versus 13.3% of

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UD group). Similarly different types of delusions and hallucinations were found by Nisha A et al[20] in bipolar depression patients. In the findings by Munoli R N et al[22] among BD patients manic episodes were most frequent, followed by depressive and mixed episodes. Mitschell P B et al[23] quoted that the differences between UD and BD include symptoms such as higher rates of psychomotor retardation, greater difficulty thinking, more early morning awakening, more morning worsening of mood and more frequent psychotic symptoms in bipolar depression relative to unipolar depression. In our study also cognitive symptoms of depression were more associated with bipolarity.No. of hospitalisations were negatively associated with the unipolar depression [p<0.05]. No. of hospitalization has only 0.3 odds of suffering from the UD, according to our findings. This indicates more hospitalizations associated with Bipolar depression, which can be explained due to multiple symptoms among BD patients like hallucinations, suicidal behaviours, anxiety, etc. We also found the number of hospitalizations and duration of illness were significantly more associated with BD. This overall suggest a more grave prognosis in bipolar depression as compared to unipolar depression.

Limitations

The small size of the sample limits the results from being generalised to a large population.Matching of samples gets restricted due to the cross-sectional nature of the study.Distribution of participants by the area of living and the type of family was not uniform across groups, causing a probable impact on findings of study.

Conclusion

From the results of our research and above discussion, we can conclude that more number of hospitalizations are associated with BD. Longer duration of illness, auditory hallucinations are more associated with BD. Depressive episode of BPAD are more disabling as compared to those with RDD. With the emergence of bipolar depression it becomes paramount not to miss bipolarity with first episode depression. Adequate measures should be taken to understand the clinical markers of bipolarity and there is requirement for newer rating scales which can assess bipolarity satisfactorily. More research is required to unfold the exact etiology and neurobiology and thus, to predict the future outcomes of bipolar depression.

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