A COMPARATIVE STUDY OF DISABILITY AND ITS BURDEN ON FAMILY MEMBERS OF BIPOLAR AND UNIPOLAR DEPRESSION PATIENTS

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ABSTRACT

AIMS AND OBJECTIVE

The primary purpose of this study is to compare the disability and its burden on the family members or caregivers of patients with bipolar and unipolar depression.

METHODOLOGY

The study was carried out in thirty cases of Bipolar and Unipolar depressive patients and their healthy relatives residing with the patient since last one year. Comparisons were made under various headings between Unipolar and Bipolar groups. Obtained Data were analysed by using unpaired 't' test, Pearson's correlation coefficient and z-score.

RESULTS

On applying IDEAS (Indian Disability Evaluation Assessment Scale), the mean scores were very low in bipolar depressed patients in comparison to unipolar depressed patients for the self-care(1.33 and 0.57), interpersonal activities(1.83 and 1.13), communication and understanding(1.80 and 0.87), work(2.63 and 1.10) and global disability score(11.50 and 7.43) and were statistically significant($p < 0.001$). The family burden was 33.76 and 23.57 in Bipolar depression and Unipolar depression using Family Burden Interview scale and was statistically significant ($p < 0.001$). No statistically significant correlation was found between socio-demographic factors, disability and family burden in both study and control group.

CONCLUSION

Bipolar depressive patients were significantly more disabled than patients with unipolar depression in all parameters of disability scale. Families of Bipolar depressive patients experienced significantly greater burden in comparison to families of patients with unipolar depression.

KEYWORDS

Bipolar Disorder, Disability, Burden.

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INTRODUCTION

Bipolar disorder is an intermittent to chronic psychiatric disorder characterized by recurring episodes of severe depressive illness and at least one episode of mania or hypomania.^[1] A major portion of the morbidity and mortality associated with bipolar disorder is derived from depressive episodes and symptoms rather than manic characteristics. Bipolar disorder is a substantial public health problem. Lifetime prevalence for the spectrum of bipolar illness is approximately 3.7%.^[2] with an average onset at age 20 and prevalence is highest in young adults.^[3] In Indian studies prevalence of Bipolar affective patient is given as 0.7 to 2.7 per thousand.^[4] Depression in Bipolar affective patient imposes a greater overall burden on patients and families as compared to unipolar depression.

The importance of mental illness as a cause of disability was realized when the Global Burden of Disease Project found out that mental illnesses accounted for a quarter of the world's disability.^[5] Four of the 10 leading causes of disability worldwide are mental disorder viz. major depression, Alcohol use disorder, schizophrenia and in Bipolar affective patient.^[6] Disability refers to the limitation in functioning that may take place at the following different levels of body, personality and society. The nature and extent of disability associated with a psychiatric illness could be an important marker of illness severity as dysfunction is a necessary criterion for the diagnosis of psychiatric disorder. Bipolar disorder has been found to be associated with the following types of disability: increased suicidal behaviour, increased health care use and cost, higher unemployment rate, higher dependence on public assistance, lower annual income and increased work absenteeism owing to illness, decreased work productivity, poor overall functioning and decreased life span.^[7,8]

Bipolar disorder also imposes a greater overall burden on families as compared to unipolar depression. It may be due to an earlier age of onset, more frequent episodes, panic disorder between episodes, psychosis; than patients with pure manic episodes,^[9] and a greater proportion of time spent in illness.^[10] It affects the family members in terms of disruption in routine family activities, family leisure, family

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interaction, interference in their normal work, physical and mental health and entails an additional financial burden.

Chakrabarti, et al. (1992) found out that the objective burden on caregivers of hospitalized patients and outpatients with bipolar disorder was significantly higher than for those with unipolar depression.^[11]

Surprisingly, in spite of being such an important illness, there has been very little empirical research done to assess the impact of bipolar depression on patients and their caregivers.

The primary purpose of this study is to examine the demographics and compare disability and its burden on the family of patients with bipolar and unipolar depression.

METHODOLOGY

In the present study, the psychosocial impact of bipolar depression on the patients and on their caregivers is measured and compared with the impact of unipolar depression on the depressed subjects and on their caregivers.

AIMS AND OBJECTIVES

1. To assess disability in patients with bipolar depression.
2. To study family burden on caregivers of patients with bipolar depression.
3. To compare disability and family burden on caregivers of patients with bipolar depression with the caregivers of unipolar depressed control.

MATERIAL AND METHODS

In this study, 30 consecutive demographically comparable patients of bipolar depression and 30 patients of unipolar depression diagnosed were taken with equal number of their caregivers. They were diagnosed as per ICD-10 criteria and attending OPD at psychiatric centre or psychiatric clinic at SMS medical college, hospital, Jaipur, India for treatment. A written informed consent was obtained from all the patients and their caregivers.

Inclusion Criteria

Patients between 18-60 years of age fulfilling the ICD-10 criteria for moderate or severe depressive disorders with minimum duration of illness being two years (score of > 16 on Beck Depression Inventory). There should be at least one hypomanic, manic or mixed affective episode in the past. Caregivers must have stayed with the patients continuously for the last one year.

Exclusion Criteria

Illiterate, uncooperative patients and caregivers with any other comorbid major psychiatric disorder or any chronic physical illness, organic brain disorder or substance dependence were excluded from the study.

Tools of Study

A specially designed semi structured proforma was used for thorough evaluation of the patients and caregivers. It included the socio-demographic data and clinical profile sheet.

Beck Depression Inventory (BDI)

The BDI rates severity with focus on behavioural and cognitive dimensions of depression. It contains 21 items, scores 0 to 3 of which 15 items deal with psychological symptoms and six are concerned with somatic ones.

Indian Disability Evaluation Assessment Scale (IDEAS)

The rehabilitation committee of Indian Psychiatric Society developed this scale. It had been tested in various centres. The alpha value was 0.8682 indicating good internal consistency between the items. It has good criterion validity and at face values. The instrument measures the desired disability.^[12]

The Family Burden Interview Schedule (FBIS)

This scale has been developed by Pai and Kapur.^[13] It is a semi-structured interview schedule. It comprises of 24 items grouped under six areas which includes financial burden, disruption of routine family activities, family interaction and leisure, effect on physical and mental health of others. A single item as a global rating measures subjective burden.

Data Analysis

The statistical treatment of the data has been done by employing both nonparametric and parametric statistical measure. Non-parametric statistical measures include frequencies, percentages, whereas parametric statistical measures include unpaired t-test and z-test and Pearson's product moment correlation.

RESULTS

Variable	Bipolar depression n = 30, f (%)	unipolar depression n = 30, f (%)
Age in (years)- mean(SD)	31.90 (7.16)	36.30 (11.23)
Sex		
1. Male	23(76.66)	24(80.0)
2. Female	7(23.34)	6(20.0)
Marital Status		
1. Single	14(28.0)	10(21.3)
2. Married	34(68.0)	36(76.6)
3. Remarried	-	-
4. Widowed	2(4.0)	-
5. Divorced	-	-
6. Separated	-	1(2.1)
Occupation		
1. Professional/Semiprof./ Skilled Worker/	10(33.3)	14(46.67)
2. Farmer/Semi-skilled/Labours	10(33.3)	7(23.33)
3. Unemployed/ Housewife/Student/ Retired	10(33.3)	9(30.0)
Education		
1. Illiterate	-	-
2. Middle	4(13.3)	5(16.67)
3. Matric/ Inter	23(76.67)	11(26.67)
4. Graduate/Post Graduate	3(10.0)	14(46.67)
Monthly Income		
1. nil	19(63.33)	6(20.0)
2. <3000	7(23.33)	9(30.0)
3. >3000	4(13.33)	15(50.0)
Religion		
1. Hindu	27(90.0)	30(100)
2. Muslim	3(10.0)	-
3. Sikh	-	-
4. Christian	-	-
Family type		
1. Nuclear	20(66.64)	18(60.0)
2. Joint/Others	10(33.34)	12(40.0)
Locality		
1. Urban	19(63.34)	26(86.67)
2. Rural	11(37.66)	4(13.33)

Table 1: Socio-demographic Data of BD and UD Group

Parameter	Group		P-value		Significance
	Control	Case			
BDI	Male	26.42 + 6.62	36.85 + 5.22	< .001	HS
	Female	20.00 + 3.91	36.85 + 5.22	< .001	HS
Burden	Male	23.96 + 3.28	34.17 + 3.95	< .001	HS
	Female	22.00 + 1.73	32.43 + 3.69	< .001	HS
Disability Score	Male	7.79 + 1.66	11.43 + 1.43	< .001	HS
	Female	6.00 + 1.15	11.71 + 1.48	< .001	HS

Table 2: Group comparisons of Socio-demographic Profiles between Bipolar Depression and Unipolar Depression Group

Variable	Bipolar Depression (n = 30) mean (SD)	Unipolar Depression (n = 30) mean (SD)	P-Value	Significance
Total BDI score	35.67(5.83)	25.13(6.80)	<.001	HS

Table 3: Distribution and Comparison of Severity of Depressive Symptoms in Bipolar Depression and Unipolar Depression Group

Variable	Bipolar Depression (n = 30) mean (SD)	Unipolar Depression (n=30) mean (SD)	P-value
Duration of illness			
1. 2-5 years	8(26.67)	19(63.34)	>.05
2. >5 years	22(73.33)	11(36.66)	<.01
Family History of Psychiatric Illness			
1. Present	11(36.67)	2(6.67)	<.01
2. Absent	19(63.33)	28(93.33)	>.05

Table 4: Comparison of Clinical Characteristics between Bipolar Depression and Unipolar Depression Group

Variable (IDEAS)	Bipolar Depression (n = 30) mean (SD)	Unipolar Depression(n=30) mean (SD)	P-Value	Significance
Self-Care	1.33(0.48)	0.57 (0.50)	<.01	Sig
Interpersonal Activities	1.83 (0.46)	1.13 (0.78)	<.001	HS
Communication & Understanding	1.80 (0.66)	0.87 (0.51)	<.001	HS
Work	2.63 (.61)	1.10 (0.61)	<.001	HS
Global Disability Score	11.50(1.45)	7.43(1.73)	<.001	HS

Table 5: Comparison of Disability Scores between Bipolar Depression and Unipolar Depression Group

Variable	Bipolar Depression (n = 30) mean (SD)	Unipolar Depression (n = 30) mean (SD)	P-Value	Significance
Family Burden	33.76(3.96)	23.57(3.14)	<.001	HS

Table 6: Comparison of Family burden Score in Bipolar Depression and Unipolar Depression Group

Variable		Self-Care	Inter-personal Relationship	Communication & Under standing	Work	Global Disability Score
Age in (years)	BD	.060	.245	.155	.046	.151
	UD	.255	-.044	.207	.475	.332
Sex	BD	-.056	.203	.290	-.187	.081
	UD	-.404	-.415	-.200	-.084	-.415
Marital Status	BD	-.000	.180	.438	-.135	.084
	UD	.157	.058	.134	.056	.277
Occupation	BD	-.156	-.020	-.124	-.058	-.120
	UD	-.151	-.116	.079	-.080	-.184
Education	BD	.084	-.350	-.036	-.039	-.109
	UD	-.440	-.473	-.235	.084	-.311
Monthly income	BD	.249	-.259	-.099	-.058	-.081
	UD	-.231	-.270	-.216	.154	-.142
Religion	BD	.000	-.123	-.068	-.165	-.115
	UD	-	-	-	-	-
Family type	BD	-.200	-.052	-.000	.195	.000
	UD	.279	.450	.116	.045	.385
Locality	BD	.049	-.331	-.402	.233	-.166
	UD	.049	-.331	-.402*	.233	-.166

Table 7: Correlation between Disability and Sociodemographic Characteristics in Patients with Bipolar Depression & Unipolar Depression

*p<.05, **p<.01, Pearson product moment(r),

Variable		Self-Care	Inter-personal Relationship	Communication & Understanding	Work	Global Disability Score
Duration of illness	BD	.107	.111	.392*	.008	-.013
	UD	.107	-.042	-.074	-.127	.049
Family History of psychiatric illness	BD	.245	.178	.508*	.111	.404*
	UD	-.234	-.047	-.071	-.179	-.105

Table 8: Correlation between Disability and Clinical Characteristics in Patients with Bipolar Depression & Unipolar Depression

*p<.05, **p<.01, Pearson product moment (r)

Variable (BDI)		Self-Care	Interpersonal Relationship	Communication & Under-standing	Work	Global Disability Score
Total score	BD	.411	.325	.481**	.292	.595**
	UD	.701**	.676**	.365*	.297	.714**

Table 9: Correlation between Disability and Severity of Depression in Patients with Bipolar Depression and Unipolar Depression Group

Pearson product moment(r), *p<.05, **p<.01

Variable (BDI)	Family Burden	
Total Score	BD	.406*
	UD	.406*

Table 10: Correlations of Severity of Depression with Family Burden in Patients with Bipolar Depression and Unipolar Depression Group

Pearson product moment(r), *p<.05, **p<.01

Variable	Family Burden
Duration of Illness	.155
Family history of psychiatric illness	.130

Table 11: Correlation between Family burden and Clinical Characteristics in Patients with Bipolar Depression and Unipolar Depression Group

*p<.05, **p<.01, Pearson product moment (r)

Variable		Self-Care	Inter-personal Relation-ship	Communi-cation & Under-standing	Work	Global Disability Score
Family Burden	BD	.345	.015	.136	.136	.251
	UD	.501**	.525**	.197	.183	.527**

Table 12: Correlations of Family burden with Disability in Patients with Bipolar Depression and Unipolar Depression Group

DISCUSSION

The mean age of bipolar depressive subjects was 31.90 (SD=7.16) and that of depressed was 36.60 (SD=11.23). The bipolar depressive sample was younger in comparison to other studies in this area.^[14,15] Most of the respondents included in our study were married males, belonging to Hindu religion, nuclear families and from urban background. Estimate of unemployment in Bipolar depressive group is reported to be 33.3%, which is also seen in earlier studies^[10]. Most of the patients in Bipolar depressive group were educated up to metric or Inter level (76.67%) while in Unipolar depressive group patients were mostly Graduate or Post Graduate (46.67%). This is also a reason for lower income (Nil 63.33%) in bipolar depressive patients because majority of the bipolar depressive patients had education levels below graduation, which probably led them to accept low paying jobs. It is also possible that bipolar depression (inclusion criteria of illness duration >2 years) is a more disabling illness, thus hampering the educational attainment

and occupation functioning as shown in an earlier study by Judd LL, et al.^[16,17]

Comparison of clinical characteristics between bipolar depression and unipolar depression groups showed significant differences in the duration of illness. [Duration more than 5 years in Bipolar group is 73.33%, while in Unipolar group is 36.66%(p value<.01)]. This may be because unipolar depression usually responds better to the treatment.^[18] The bipolar depression seems to be more chronic than unipolar depression in our study, which corresponds to the findings in other studies.^[14,16,19] Bipolar depressive patients have been found to have statistically significant higher score on all parameters of disability scale, which indicates that bipolar depressive patients were more disabled than the unipolar depressed.

The difference in the score could be due to the severity of depression in the two samples (p-value<.001). Bipolar patients, however, were disabled maximally in the work domain (2.63 ± .67) which assesses the Pearson's performance in work/jobs, in house work and in school/college.

This may be due to the fact that most of the patients in bipolar depressive group had no source of income (63.3%) in comparison to unipolar depressive group (20.0%). The bipolar depressive patients also had statistically significant low score on self-care, interpersonal activities, communication and understanding in comparison to unipolar depressed subjects. The overall disability in study group was also statistically significantly low from that of the control group(p-value<.001). It is possible that since bipolar depressed patients had been ill for longer duration (>5 years = 73.33%), family members must have felt the impact of bipolar depressed patients' disabilities more because of the acuteness and severity of depressive symptoms. These findings are consistent with the result of other studies.^[20, 21]

The evaluation of burden on the caregivers was done as one of the means to assess the impact of bipolar depression on the caregivers. The information regarding the burden is obtained from the relative who were providing care for the patient for at least one year. The family burden Interview schedule is used to measure the burden in six different areas like financial burden, disruption of routine family activities, disruption of family leisure and family interaction, effect on physical health of others and effect on mental health of others. Burden was found to be present in all the areas.

The total score of family burden in study group is statistically significant with higher score in comparison to unipolar depression group (p -value<.001).

This may be due to more duration of illness, frequent hospitalizations, most of the patients having no source of income and more severe depression in study group.

These findings are consistent with other comparative studies.^[22,23,24,25] The mean score of the Bipolar depressed group was 35.67 (SD 5.83), which lies in the severe range. Unipolar depressive subjects had a mean score of 25.13 (SD 6.80), which also falls in severe ranges but less severe significantly than bipolar depressive patients.

Correlation between parameters of impact of bipolar depression and socio-demographic/clinical/psychological variables-No statistically significant correlation was found between Socio-demographic factors, disability and family burden in both study and control group. This may be due to small sample size ($N=30$) in both study and control group. Family history of psychiatric illness had also significant positive correlation with Global disability score. These finding shows that presence of family history of psychiatric illness correlated positively with overall disability. Severity of depression is statistically significant positively correlated with Global disability score, which shows that with increase in severity of depression, disability also increase. There is significant positive correlation between severities of depression with family burden. This indicates that family burden increases when patient's depressive symptoms increases.

SUMMARY AND CONCLUSIONS

Bipolar depressive patients were significantly more disabled than patients with unipolar depression in all parameters of disability scale. Families of bipolar depressive patients experienced significantly greater burden in comparison to families of patients with unipolar depression.

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