

A Study of Prevalence of Psychiatric Comorbidity in Bipolar Affective Disorder Patients

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ABSTRACT

Background and Aim: Many studies have explored prevalence of psychiatric comorbidity in bipolar affective disorder. However, Indian studies are lacking in this area. The present study was aimed to assess prevalence of psychiatric comorbidity in bipolar affective disorder patients.

Material and Methods: 100 randomly selected patients with bipolar affective disorder as per ICD-10 criteria were cross-sectionally assessed. After taking written informed consent and recording socio-demographic details, Young's Mania Rating Scale, Hamilton Rating Scale for Depression, Mini International Neuropsychiatric Interview, Global Assessment Scale and Brief Psychiatric Rating Scale were applied. Appropriate statistical methods were used.

Results: Out of 100 patients, majority were males (71%), belongs to 21-30 years (36%) and 31-40 years (23%) age group, under matric (59%), married (66%). Majority of patients were unemployed (53%) and belonged (75%) to nuclear family, from rural areas (58%). A significantly higher number of male patients were found in both groups (87.87% & 62.68% respectively ($\chi^2 7.04$, $p < 0.05$), had a family income of rupees 5001-10000 93.94% & 33.33% respectively ($\chi^2 7.08$, $p < 0.05$ S), history of suicide attempts 27.27% & 10.45% respectively ($\chi^2 4.45$, $p < 0.05$ S). A significantly higher number of patients with comorbidity than without comorbidity, had more than two admissions 21.21% & 5.97% respectively ($\chi^2 4.95$, $p < 0.05$ S), treated in ward cases 45.45% & 23.88% respectively ($\chi^2 4.73$, $p < 0.05$ S). Majority of patients belong to other harmful use/dependence group (54.55%) and 24.24% to Anxiety disorder. Remaining 15.15% and 6.06% belong to Alcohol harmful use/dependence and Personality disorder respectively.

Conclusion: Approximately 1/3rd patients with bipolar disorder have psychiatric comorbidity, most common being substance use & dependence followed by anxiety disorders. Comorbidity in bipolar disorder worsens the prognosis and future course of illness. Management of comorbidity along with the primary disorder should be an integral part of management of patients with bipolar affective disorder.

Keywords- bipolar, comorbidity, prevalence, substance, alcohol.

INTRODUCTION

Bipolar disorder, a chronic and recurring condition, is a major public health problem, affecting close to 2.6 to 7.8% of population and it is the sixth leading cause of disability. Life time prevalence of bipolar 1, bipolar 2 and hypomania is 0-2.4%, 0.3-4.8% and 2.6-7.8% respectfully. ^[1]

Bipolar disorder presents major challenges for contemporary clinical practice. The diagnosis is frequently missed or mistaken for simple depressive illness, sometimes with potentially dangerous overuse of antidepressants. ^[2] Similarly the condition is commonly misdiagnosed in the children and in the elderly, often in

association with inappropriate use of antidepressant or stimulants.^[3]

The co-occurrence of axis I disorder with other psychiatric disorder or symptoms has been widely recognized. Comorbidity refers to the presence of two or more disorders that occur simultaneously over a long period of time. Almost all axis I and axis II disorders may co-occur with bipolar disorder. The most common are substance use disorders, anxiety disorders, panic disorder, obsessive compulsive disorder and borderline personality disorder.^[4-5]

Most common Anxiety disorders in BD (Bipolar Disorder) are OCD (Obsessive Compulsive Disorder), PD (Panic Disorder) and SP (Social Phobia).^[4-6] Prevalence of panic disorders in bipolar disorder is 10-36%. Moreover, axis I comorbidity, especially current comorbidity, may be associated with an earlier age at onset and worsening course of bipolar illness. Further research into the prognostic and treatment response implications of axis I comorbidity in bipolar disorder is important and is in progress.^[4] Epidemiological studies described comorbidity with social phobia in 5.9% to 47.1% of bipolar disorder patients, with higher percentages among subjects with bipolar disorder II or recurrent brief hypomanias.

Prevalence of OCD in bipolar subjects is 14.6 to 21%. Studies comparing OCD patients with comorbid BD or unipolar depression found, among bipolar subjects, earlier onset of obsessive-compulsive symptoms, more episodic course of OCD, higher comorbidity with alcohol, psychostimulant and sedative abuse, and with PD-agoraphobia, as well as higher number of depressive episodes.^[7-8]

Comorbidity of BD with anxiety disorders has diagnostic, therapeutical and prognostic implications. The persistence of anxiety disorders probably reflects the difficulty in the clinical management of these cases, as serotonin and monoamine-oxidase reuptake inhibitors, employed in the therapeutic of anxiety disorders, may induce manic, hypomanic or mixed state

conditions. Additional challenges include a high mortality rates in the disorder, owing not only to very high risks of suicide but also to accidents and medical complications of comorbid substance use disorders. Lastly, comorbidity with Anxiety disorder is very important in the management of bipolar patients due to their high prevalence, impact on the disease's course and for representing a challenge in the planning of efficient therapeutical strategies. The rising interest in research and clinical studies in this field is fundamental to elucidate the pathophysiology of deregulation of affect and consequently to provide a more specific treatment for BD and its comorbidities. The present study is planned to determine the prevalence of comorbid psychiatric disorders in patients with Bipolar disorder. The present study was aimed to determine the prevalence of comorbid psychiatric disorders in patients with Bipolar disorder.

MATERIAL AND METHODS

100 patients with bipolar disorder diagnosed as per ICD 10 were recruited from Psychiatry department of Guru Nanak Dev Hospital Amritsar. The nature of study was explained to the participants, confidentiality was ensured and written informed consent taken. Further diagnosis of comorbid disorders was confirmed on the basis of ICD-10 criteria. Patients having medical comorbidity or organicity were excluded.

The following tools were applied:

1. A semi structured proforma containing socio-demographic details, present history, past history, family history of psychiatric illness.
2. Young's Mania Rating Scale (YMRS)
3. Hamilton Rating Scale for Depression (HAM-D)
4. Mini International Neuropsychiatric Interview (MINI)
5. Global Assessment Scale (GAS)
6. Brief psychiatric rating scale (BPRS)

STATISTICAL ANALYSIS- Chi-square (χ^2) & **p-value** statistic was used to

determine the statistical significance of results.

RESULTS

TABLE 1: DISTRIBUTION OF PATIENTS ACCORDING TO SOCIDEMOGRAPHIC VARIABLE (n = 100)

Sociodemographic variable		Total n(%)
Age	10-20	6(6%)
	21-30	36(36%)
	31-40	23(23%)
	41-50	22(22%)
	>51	13(13%)
Sex	Male	71%
	Female	29%
Religion	Hindu	32%
	Sikh	68%
Education	Illiterate	11(11%)
	Matric	48(48%)
	Senior Secondary	26(26%)
	Graduate	15(15%)
Marital Status	Unmarried	34(34%)
	Married	66(66%)
Occupation	Unemployed	53(53%)
	Salaried	9(9%)
	Self Employed	38(38%)
Income	≤5000	40(40%)
	5001-10000	42(42%)
	10001-15000	10(10%)
	>15000	8(8%)
Family Type	Nuclear	75(40%)
	Joint	25(42%)
Area	Rural	58(58%)
	Urban	42(42%)

Table 1 shows the sociodemographic variables of patients. Majority of patients were males (71%), belongs to 21-30 years (36%) and 31-40 years (23%) age group, under matric (59%), married (66%). Majority of patients were unemployed (53%) and belonged (75%) to nuclear family, from rural areas (58%).

Table 2 Highlights comparison of patients with and without psychiatric comorbidity. A significantly higher number of male patients were found in both groups (87.87% & 62.68% respectively ($\chi^2 7.04$, $p < 0.05$), had a family income of rupees 5001-10000 93.94% & and 33.33% respectively ($\chi^2 7.08$, $p < 0.05$ S), history of suicide attempts 27.27% & 10.45% respectively ($\chi^2 4.45$, $p < 0.05$ S). A significantly higher number of patients with comorbidity than without comorbidity, had more than two admissions 21.21% & 5.97% respectively ($\chi^2 4.95$, $p < 0.05$ S), treated in ward cases 45.45% & 23.88% respectively ($\chi^2 4.73$, $p < 0.05$ S).

TABLE 2: COMPARISON OF PATIENTS WITH AND WITHOUT COMORBIDITY IN THE STUDY SAMPLE ACCORDING TO SEX, INCOME, SUICIDE ATTEMPT, NUMBER OF ADMISSIONS & CURRENT TREATMENT (n = 100)

Sex		Patients with Psychiatric comorbidity n(%)	Patients without Psychiatric comorbidity n(%)	Total n(%)	P Value
Male		29(87.87%)	42(62.68%)	71%	$\chi^2 7.04$; $p < 0.05$ S
	Female	4(12.12%)	25(37.31%)	29%	
Income		Patients with Psychiatric comorbidity n(%)	Patients without Psychiatric comorbidity n(%)	Total n(%)	$\chi^2 7.88$; $p < 0.05$ S
	≤5000	11(33.33%)	29(87.88%)	40(40%)	
	5001-10000	11(33.33%)	31(93.94%)	42(42%)	
	10001-15000	6(18.18%)	4(5.97%)	10(10%)	
>15000	5(15.15%)	3(4.48%)	8(8%)		
Suicide Attempt		Patients with Psychiatric comorbidity n(%)	Patients without Psychiatric comorbidity n(%)	Total n(%)	$\chi^2 4.45$ $p < 0.05$ S
	Positive	9(27.27%)	7(10.45%)	16(16%)	
Negative	24(72.73%)	60(89.55%)	84(84%)		
Number of Admission		Patients with Psychiatric comorbidity n(%)	Patients without Psychiatric comorbidity n(%)	Total n(%)	$\chi^2 4.95$ $p < 0.05$ S
	≤ 2	26(78.79%)	63(94.03%)	89(89%)	
	> 2	7(21.21%)	4(5.97%)	11(11%)	
Current Treatment		Patients with Psychiatric comorbidity n(%)	Patients without Psychiatric comorbidity n(%)	Total n(%)	$\chi^2 4.73$ $p < 0.05$
	OPD	18(54.54%)	51(76.11%)	31(31%)	
	Ward	15(45.45%)	16(23.88%)	69(69%)	

TABLE 3: DISTRIBUTION OF PATIENTS ACCORDING TO TYPE OF COMORBIDITY IN BIPOLAR DISORDER (n = 100)

Comorbid Diagnosis	Total n(%)
Alcohol harmful use/dependence	5(15.15%)
Other substance harmful use/dependence	18(54.55%)
Anxiety disorders	8(24.24%)
Personality disorders	2(6.06%)
Total n(%)	33(100%)

Table 3 highlights a distribution of patients according to type of comorbidity. Majority of patients belong to other harmful use/dependence group (54.55%) and 24.24% to other Anxiety disorder. Remaining 15.15% and 6.06% belong to

Alcohol harmful use/dependence and Personality disorder respectively.

DISCUSSION

The present study indicated that 33% of patients had at least one psychiatric comorbid diagnosis currently. Similar high comorbid rates have been obtained in a study by Vieta E et al (2000), [9] which revealed that half of patients had lifetime comorbidity with other psychiatric disorders. [5] Another study by A. Zutshi(2006) [10] revealed that 61% of bipolar subjects had lifetime comorbid disorders. This difference in percentage can be explained by the fact that only current comorbidity was diagnosed in the present study, in contrast to lifetime comorbidity seen by the above studies.

Majority of patients were males in both the groups and a significantly higher number (87.87%) of male patients were found in group with comorbid diagnosis than without comorbid disorder (62.68%). This is in contrast to the finding of a community survey, the national comorbidity survey, which found females predominance. [11] Also, another western study found that the male-female ratio in subjects of mood disorders with comorbid anxiety was 1:2. [12] Our findings may be explained by the fact since men are the predominant bread-earners for the family, they are more likely to be brought to the hospital for treatment, than females. Another possible speculation for the lower rates of comorbidity in females could be lower substance use/dependence in females as compared to males, in our setup.

People from rural background formed the bulk in both the groups which could be expected from the fact that a rural preponderance existed in the catchment area of the study. This study shows that majority of the patients in both the groups with and without comorbidity were married, with no statistically difference between the two. Again the study provides evidence that Sikhs formed the major group of patients' religion with and without comorbid

diagnosis. This can be explained by the fact that Sikhs are in majority in the catchment area.

Study also depicts that majority of patient in both the groups with and without comorbidity were unemployed. It also depicts that although there was no statistical difference, only 30.30% of patients with comorbid diagnosis were self employed as compared to 41.79% in patients without psychiatric comorbidity.

The average family income for patients with a comorbid diagnosis was found to be less as compared to patients without a comorbid diagnosis. It depicts that 93.94% of patients with a comorbid diagnosis had income of rupees 5001-10000 as compared to only 33.33% without comorbidity group.

In the present study, nuclear family set up was found to be the dominant family pattern in both groups, with no statistically difference between the two. This is in accordance with the previous Indian studies conducted on mood disorders with the nuclear family system. [13] Similarly a study by VenkobaRao (1970) reported that the joint family constellation could counteract effects of bereavement, early parental loss and similar life stresses, thus causing a lower prevalence of depression in joint families. [14]

The present study indicated that 42.42% of patients with a comorbid diagnosis had their age of onset in the 21-30 year age group as compared to 35.82% patients without a comorbid diagnosis in the same age group, with no statistical difference separating the two group. These findings are comparable to western studies by Mcelroy SL et al (2001) , which revealed that both lifetime axis one comorbidity and current axis 1 comorbidity were associated with earlier age of onset. [15] Another study by Simon NM et al(2004) showed that lifetime anxiety disorder in cases of bipolar disorders were associated with earlier age of onset. [16]

The present study indicated that 27.27.% of patients with a comorbid

diagnosis had positive family history of suicide as compared to 10.45% patients without a comorbid diagnosis and the difference between the two group was statistically significant. These findings are comparable to western studies by Stephanie Kruger et al (2000), which revealed higher incidence of prior suicide attempts in bipolar subjects with OCD than bipolar subjects without OCD. Another study by Vieta E et al (2000) [9] showed a significantly higher rates (45%) in patients with comorbidity than without comorbidity (5%).

The present study depicts that a significantly higher number (21.21%) of inpatient admission were obtained by patients with comorbid diagnosis than those without (5.97%), in the present study.

The present study found 33% cases of psychiatric comorbidity in bipolar disorder. Other harmful use/dependence group (18%) was the most common type of comorbidity and 2nd most frequent was anxiety disorders (8%). Remaining 5% and 2% cases belong to Alcohol harmful use/dependence and Personality disorder respectively. Similar results were seen in a study by Vieta E(2000) [9] which showed that substance abuse or dependence was present in (21%) and anxiety disorder in (8%) of cases. These findings were again supported by a study by Mcelroy SL etal (2001), [15] which revealed that the frequency of both lifetime comorbid anxiety disorders and substance use disorders were 42%. Another study by Tamam L et al (2002) showed that obsessive compulsive disorder (39%) was most common comorbid lifetime anxiety disorder followed by social phobia (20%). [17] This difference in percentage OCD/anxiety disorders can be explained by the fact that, only current comorbidity was diagnosed in the present study done, in contrast to lifetime comorbidity seen by the above studies. It is evident from discussion that comorbidity in bipolar cases is very common and it affects the course of illness by worsening the

course of illness due to more relapses and increasing severity of illness.

Limitations

- 1) The present study had small sample size.
- 2) The current study was a hospital based study.

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How to cite this article: Singh K, Garg PD. A study of prevalence of psychiatric comorbidity in bipolar affective disorder patients. *International Journal of Research and Review*. 2019; 6(12):211-216.
