A Cross-sectional Study of Socio-demographic Profile of Manic Patients in North-East India

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Abstract:
Background: Bipolar disorder is a rare but very serious mental illness which has a huge impact on social personal and occupational functioning of an individual. It is characterized by episodic occurrence of symptoms of the illness. The symptoms during the episode can be of mania, or depression or can have a mixed presentation having symptoms of both mania and depression. The aim of this paper is to study the socio-demographic correlates of manic patients in the North East India.
Materials and method: the study was conducted on 30 patients in mania, who were admitted in a tertiary care facility for psychiatric illness in North-East India. Purposive sampling was done after taking informed consent from the participants. Mini-International Neuropsychiatric Interview version 6.0 was applied.
Results: The study sample comprised of 21 males and 9 females. The mean age of participants was 32 years. Majority of the patients were Hindu by religion followed by Muslims and Christians. Most of the cases came from the rural areas and most of them lived in nuclear families. 10% of the participants had received no formal education, whereas all others could read and write rest in at least one language. 56% of the participants were married, 3.3 % were separated from the spouse and rest were unmarried. Most of the female cases were homemakers while most of the male patients were daily wage earners. 17% of the cases had a positive family history. The mean age of onset of illness was 26 years. The average numbers of episodes of illness experienced were 4. Average numbers of manic episodes experienced were 3 and average number of depressive episodes experienced was 1.
Conclusion: Bipolar disorder is a severe mental illness affecting both men more than women and impacts their education, occupational and interpersonal aspects of life.
Key word: manic episode, socio-demographic factor

I. Introduction

Bipolar Disorder is a serious psychiatric illness which is although rare but is a very disabling illness due to its severity and chronicity. Population and aging has lead to an increase in the burden of bipolar disorder over time. The Global Burden of Disease study 2013 has found that 48.8 million people around the world are suffering from this illness. It is responsible for 9.9 million DALYs in 2013 and 1.3% of total YLDs [1]. Bipolar disorders are typically characterized by the episodic nature of illness and full recovery in between the episodes when the patient is euthymic. During the different phases of illness the mood swings from the euthymic state to major depressive, manic or mixed state, rarely patients can only have manic episodes.

Manic episodes are characterized by elevated mood of varying intensity out of keeping with the individual circumstances, increase in quantity and speed of physical and mental activity. Sometimes the mood is irritated or suspicious instead of being elated. Depending upon the severity the patient in manic episode can be in state of hypomania, mania without psychotic symptoms and mania with psychotic symptom

The Epidemiological Catchment Area (ECA) study found a lifetime prevalence of 1.2% together for type I and type II bipolar disorder; which is consistent with the study of Weissman and Myers (1978) when the prevalence was found to be 0.6% for each of type [2, 3]. The most recent study, the National Comorbidity Survey Replication, found a lifetime prevalence of 1.0% bipolar disorder has an approximately equal gender distribution [2, 4]. BD tends to occur in higher socioeconomic strata in contrast to schizophrenia which occurs in lower socio-economic strata [5]. Post 1940s there is an increase in the incidence of bipolar disorder has been seen. Bipolar disorder typically begins in mid-adolescence to earlyadulthood [6]. Once a manic or hypomanic episode has occurred, mostIndividuals will experience a life-long course of bipolar illness, that is, recurring

manic and depressive episode [7]. In National Mental Health Survey of India 2015-2016, the lifetime prevalence of Bipolar disorder was 0.5% and current prevalence was found to be 0.3%.Males had a slightly higher rate for current prevalence of 0.3% in comparison to females where it was 0.2%. Also those between 40-49 years of age (0.4 %) and urban metro residents (0.7%) had a higher prevalence for current episode [8]. This study of socio-demographic profile of manic patients has been done with an aim to understand these factors better in relation to manic patients.

II. Materials and Method

This study has been done in a tertiary care setting for mental illness located in north eastern part of India. Purposive sapling was done for the selection of samples who met the selection criteria the study was done on the patients who were admitted in the inpatient department of the hospital during the six month study period. A total of 30 patients were included in the study who met the selection criteria after obtaining their due informed consent.

Inclusion criteria for the subjects –
1. Newly admitted patients in manic episode who were diagnosed according to ICD—10. Both patients who had first episode of manic and patient who had previous episodes of mania but were off medication for the at least one month prior to admission were included.
2. Age: 18 to 50 years
3. Both male and female subjects
4. Informed consent of the guardian/Nominated representative and subjects.

Exclusion criteria for cases – Those with other co-morbid psychiatric disorder including substance use disorder or any other medical disorder.

Mini-International Neuropsychiatric Interview 6.0 was used to validate the diagnosis of manic episode and to rule out other psychiatric comorbidities in the study subjects. A semi structured pro forma was used for the assessment of socio-demographic and clinical variables of the subjects. Result was given in terms of frequency, percentage, mean values of the variables and is represented in tables.

III. Results

There were total of 30 participant comprising of 21 males and 9 females. The mean age of cases was 33.17years. 60% of participants were Hindu, 36.67% were Muslims and 3.33% were Christian [Table 1, 2, 3].

33.3% of the subjects were from urban area and 66.6% from rural areas.86.6% of the cases lived in nuclear family.56.7% were married, 1 (3.33%) was separated and rest were unmarried. 56% had received 6 to 10 years of formal education and 10% of the cases had received no formal education. 23.3 % were unemployed, 43.3% were daily wage earner (categories of cultivation service and daily labor are clubbed together as daily wage earner). 6.7% of cases had their business. 23.3% were homemakers and 3.3% were student. 5 subjects i.e., 16.6% had family history of bipolar disorder rest had no history of psychiatric illness.

Mean age of onset of illness was 26.33+/-9.78 years. Mean number of episodes experienced by cases were 2.73 +/- 1.893(male=3.62+/-2.2, female= 4.33+/-4.4). Numbers of manic episodes were more than depressive episodes in both males (manic= 2.52+/- 1.5, depressive= 1.1+/-1.6) and females (manic= 3.22+/- 2.6, depressive= 1.11+/-2.02).The mean duration of the current episode was 6.1+/- 4.01weeks [Table 5].

Table 1. Number and age- distribution of the participant

		Control
Sex	Male	21
	Female	9
Total		30

Table 2. Mean age of male and female subjects:

Sex	Number of subjects	Mean age of subjects in years
Male	21	35.38
Female	9	28

Table 3. Religion wise distribution of subjects:

		Number
Religion	Hindu	18
	Muslim	11
	Christian	1
Total		30

Table 4. Distribution of other socio-demographic factors:

Variables	Items	Number	Percentage (%)
Domicile	Urban Rural	10 20	33.3% 66.6%
Type of family	Nuclear Extended	26 4	86.7 13.3
Marital status	Married Unmarried Saperated	17 12 1	56.7% 40% 3.3%
Educational level	None 1-5 years 6-10 years 10-15 years	3 5 17 5	10% 16.7% 56.6% 16.7%
Occupation	Unemployed Daily wage earner Business Homemaker Student	7 13 2 7 1	23.3% 43.3% 6.7% 23.3% 3.3%
Family history of psychiatric illness	No family history History of BD	25 5	83.3% 16.7%

Table 5.Illness related factors in cases:

		N	Mean	Std. Deviation	Minimum	Maximum
Age at onset of illness	Male	21	26.10	9.919	18	50
	Female	9	26.89	9.829	18	45
	Total	30	26.33	9.728	18	50
Number of episodes	Male	21	3.62	2.247	1	8
	Female	9	4.33	4.416	1	15
	Total	30	3.83	2.995	1	15
Number of manic episodes	Male	21	2.52	1.504	1	7
	Female	9	3.22	2.635	1	9
	Total	30	2.73	1.893	1	9
Number of depressive episodes	Male	21	1.10	1.640	0	6
	Female	9	1.11	2.028	0	6
	Total	30	1.10	1.729	0	6
Duration of current episode in weeks	Male	21	5.19	3.669	1	16
	Female	9	8.22	4.177	2	16
	Total	30	6.10	4.012	1	16

IV. Disscussion

There were 21 male and 9 female subjects. According to the study done by Wiesmann et al., in 1988 bipolar disorder has equal prevalence in both genders, but in the National Mental Health Survey of India, 2015-2016 the prevalence in males (0.7%) was found to be higher than in females (0.3%) [3, 8]. In another study done by Ramdurg et al., in 2013, on patients with bipolar disorder in India the representation of males (64) was more than for females (36) [9]. Similarly the representation of females (16) was less than that of males (24) in a study done by Kulhara et al., in 1999 on bipolar patients [10]. The representation of females in present study was thus consistent with the representation of males and females with bipolar disorder in other studies. There may be several factors responsible for disparity in the representation of males and females. The sampling technique was purposive, so actual representation of males and females in community samples is not reflected in the present sample. More male representation may be due to factors like severity of symptoms, more aggression making it difficult to manage them in domiciliary settings etc. There may be a gender wise difference in help seeking behaviour and health care service utilization. Stigma may be another reason why females seek less help and thus have under-representation.

The mean age of the subjects was 32.27 +/- 10.16 years. The mean age of female subjects was 32.67 +/- 10.80 years and for male subjects was 32.10+/- 10.14 years which was comparable.

Religion wise distribution of cases:60% of the subjects followed Hinduism, 36.67% were Muslim and 3.3% were Christian by religion, similar religion-wise distribution of population was also seen in the Census of India, 2011, for the region [11].

Domicile of subjects:66.4% cases hailed from rural areas. 85% of population in the region still resides in rural areas. The present study was conducted in the institute where most patients from rural areas of the region come for treatment.

Type of family: 85% of subjects lived in nuclear families which is more than what was found in census 2011 [11]. In an Indian study by Swaroopachary et al, 2018, it was found that 76% of patients with bipolar disorder lived in nuclear families and rest of them in extended families [12]. BD is a chronic episodic illness. When the patients are in the manic episode they become very meddlesome intrusive and assertive which leads to a lifelong friction between the patient and their family members, friends and relatives. So they live with those who are dependent on them or extremely close to them.

Marital status of cases: As found in the study of Ramdurg et al., in 2013, 68% of bipolar cases were married and 32% were unmarried [9]. In the present study 56% were married, 40% were unmarried and 1 case out of 30 was separated from the spouse. Sexual appetite during the manic episode increases, many patients marry during the episode. Married patients may get involved in extramarital relationships which may lead to multiple sexual contacts, divorces and separation. In the euthymic phase most patients understand the demands of marriage and are capable of fulfilling them and so they get married.

Educational level of cases: 10% of the total case population was literate, 56.65 of patients had received at least 6-10 years of formal education. This was similar to the findings in the study of Ramdurg et al., 2013, where mean years of formal education received by the patients were 8.9 years and in the study done by Swaroopachary et al., in 2018, where 46.7% of the BD patients were found to have received 6 to 10 years of formal education [9, 12].

Occupational status: 23.3 % of cases were unemployed which is much higher than the unemployment rates in India. According to a report by International Labour Organization 2019, unemployment rates in India are 3.4% [13]. 23.3% were homemakers, 6.6% were self-employed and rest were daily wage earner. Persons with mental illnesses find it difficult to get regular employment for various reasons that include their disability in multiple spheres e.g. communication, relationship, adjustment with stressors etc.

Family history of psychiatric illness: There is a strong genetic component in Bipolar Disorder. Taylor et al., (1980) and Tsuang et al., in 1985 found an increase in the chance of occurrence of BD in those who had a family history of BD than those who did not have a positive family history [14, 15]. Family history was positive for the presence of BD in the first degree relatives of 17% of the cases and similar results are reported by multiple studies.

Age of onset of illness: The mean age of onset of illness was 26.33+/-9.7 years of age (Male: 26.10+/- 9.92 years, Female: 26.89+/-9.83 years of age) which is consistent with the finding of epidemiological study of Merikangas et al., in 2011 [4], where they found that the mean age of onset for bipolar disorder is in early 20s, however, Pini et al., in year 2005, suggested that it can lie anywhere between 20 to 30 years of age[16] . In a large population based cohort study by Kroon et al., in 2016 found two peaks of age of onset for BD, one at 15-24 years and second at 45-54 years [17]. Recall bias for some of the milder early episodes should also be considered as confounding factor in this regard.

Total number of episodes of illness: The maximum number of episodes of illness experienced by an individual was 15 in female group and 8 in male group. The mean of the number of episodes experienced by males and females was 3.62+/- 2.2 and 4.33+/- 4.4 respectively. The mean of the number of episodes experienced by the cases was 3.83+/- 2.9. In a study done by Peters et al., in 2017 with sample size of 909, the average number of mood episodes experienced in BD was 18.69 [18]. In an Indian study done by Ramdurg et al., in 2013 the average number of episode experienced by a patient was 5.67+/-7 [9]. There is a wide variability in the number of episodes one may experience in a lifetime and it cannot be predicted. As the disease progresses the patient may experience more frequent or longer episodes of illness.

Number of manic episodes: The mean of the number of manic episodes experienced were 2.73+/- 1.8. The maximum number of manic episodes of illness experienced by an individual female was 9 and by an individual male was7. The mean of the number of manic episodes experienced by males and females were 2.52+/- 1.5 and 3.22+/- 2.6 respectively. In a study done by Peters et al., in 2017, the average number of manic episode experienced was 7.59 [18]. Ramdurg et al., found the mean numbers of manic episode to be 3.71 in their study [9].

Number of depressive episodes: The mean of the number of episodes experienced by the subjects was 1.11+/- 1.7. The maximum numbers of depressive episodes experienced were 6 by a male and 6 by a female. The mean of the number of episodes experienced by males and females was 1.1+/- 1.6 and 1.11+/- 2.0 respectively. In the study by Peters et al., in 2017, the average number of depressive episode was found to be 11.10 [18]. Ramdurg et al., found the mean number of depressive episode to be 2.1 in their study [9].

In the present study numbers of episode of illness reported were more in females than in males for both mania and depression. Depressive episodes were less than manic episodes in both the genders. Depression in males often get under-reported because in males symptoms of depression are more externalized and lacks typical presentation of depression, men also tend to minimize their depressive symptoms also there occurs a reporting bias for episodes of depression in both males and females. Also manic episodes are more troublesome for people around the patient whereas symptoms of depression in society are ignored and are called as weakness of character.

V. Conclusion
Bipolar disorder is a chronic and progressive illness with early age of onset affecting both males and females of all religions severely effecting their socio-occupational functioning.

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