



**Brief Report**

# **Bipolar mood disorder cases hospitalized in Farabi hospital of Kermanshah city (western part of Iran): 15-years survey (2001-15)**

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## **Abstract**

**Introduction:** Bipolar mood disorder is one of the most common psychiatric disorders. This study examined some basic demographic characteristics and variables of the disease in patients with bipolar mood disorder hospitalized in Farabi hospital of Kermanshah city.

**Materials and Methods:** This descriptive-analytical study was performed on all patients with bipolar mood disorder that successive year 2001 to 2015 had been hospitalized in Farabi hospital of Kermanshah city. The required information from the patient records collected. Data analyzed by software SPSS.16, with using U-Mann-Whitney and ANOVA tests.

**Results:** A total of 218 patients with bipolar mood disorder contain 130 (59.6%) men. In term of marital status, 45.9% of them were married. The average age of patients was 39.6±12.9 years. In term of residency, 73.4 percents of patients live in urban areas. Assessment of different demographic variables showed that the average number of hospitalizations was significantly different in history of smoking, history of opioid abuse and family history of addiction ( $P<0.05$ ).

**Conclusion:** On average, about 15 individuals with bipolar mood disorder have been hospitalized yearly. It seems that regarding educating the patients and their families, more programs and resources should become available, especially in urban areas and families with a history of addiction and smoking.

**Keywords:** Bipolar disorder, Demographic variables, Hospitalization

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## **Introduction**

Today, for different reasons, psychological tensions have been increased so the prevalence of various mental illnesses has remarkably grown. One of the most important types of mental illnesses is mood disorders which includes major depressive disorder and Bipolar Mood Disorder (BMD) (1). Bipolar mood disorder (mania-depression) is one of the most common psychiatric illnesses. Based on "Disability Adjusted Life Years (DALY)" scale, it is ranked six among top 10 causes of disability in 1990 (2). In this disease which usually occurs after adolescence, mood disorder is so severe that causes a lot of damages such as personality, psychological, family, economic and occupational damages and in many

cases, hospitalization is necessary to prevent the patient from harming him/herself and others. More than 60% of these patients have a history of substance abuse, 20-50% of them attempt suicide (3). Excessive excitement and bad life events greatly affect relapses (4). Also, positive events, such as pregnancy and childbirth, marriage and job promotion, sometimes lead to recurrence of the disease (3-5). BMD has frequent relapses and usually 90% of patients experience relapse (5). Thus, due to the high prevalence of this disease in the world, including in Iran, high number of hospitalized patients, heavy costs, and family and social complications caused by the disease (5), added to treating chronic phases of the disease, recurrence of the disease must be prevented. Results obtained from the present study, in which BMD patients admitted to Farabi hospital of Kermanshah are investigated, can be used to plan for prevention and better control

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of this disease in the province.

### Materials and Methods

The present research is a descriptive-analytic study. The study population includes all patients with BMD. Statistical society includes all patients with BMD who were admitted at least once to this hospital, between early 2001 and December 14, 2015. Those who had history of hospitalizations before 2001 were excluded. Convenient sampling method was selected for this research and sampling units were the patients' record. The information needed in this study was collected from patients' records that are available in the archives of Farabi Medical-Educational Center of Kermanshah. Patients' records include emergency cases and patient's status description that physicians take from them at each hospital admission. All dates of hospitalization, discharge, variables and the patient's information were taken from patient admission and discharge sheet, patient record sheet, patient clinical and psychological interview form, and curative forms completed by psychiatrists and assistants for patients. In order to resolve deficiencies in the records and to be aware of the patients' recent status, researchers contacted patients who had a call number. Two of these patients who did not have a contact number and their files did not have the required information were excluded. Eventually, 218 subjects were gathered. All information will remain confidential. The collected data were analyzed by SPSS software version 16 and using descriptive statistics (number, percentage, mean and standard deviation), Kolmogorov-Smirnov, U-Mann-Whitney and ANOVA tests.

### Results

A total of 218 patients with BMD enrolled in this study, among whom 130 (59.6%) male and 54.1% were single, divorced or widowed. Patients' ages ranged from 18 to 83 years with mean age of  $39.6 \pm 12.9$  years. Among these, 200 patients aged between 20 and 59 years. Mean age at onset of BMD was  $27.6 \pm 12.1$  years. 14 patients did not know their age at onset of the disease. Of 218 patients enrolled in this survey, total number of admissions of 8 patients was unknown, but for the rest of 210 patients, number of admissions was variable between 1 and 40. Also, of these 210 patients, 23 patients (10.6%) were admitted only once and 50 patients (22.9%) were admitted twice which had the highest frequency.

Only 108 of these 218 patients had the accurate date of admission and discharge in their hospital

records. After contacting those who had call number, 3 patients were reported dead.

Regarding "how the disease began", 137 out of 218 patients experienced sudden onset of disease and usually had no history but affected by a sudden stressor such as bad event (e.g. death of loved ones) or good event (e.g. marriage and childbirth). Distribution of stressors and possible factors contributing to bipolar mood disorder showed that the highest frequency was related to history of smoking (40.8%) and substance abuse (26.1%) (Table 1).

**Table 1.** Frequency distribution of possible factors contributing to BMD in patients admitted to Farabi hospital of Kermanshah (2001-2015)

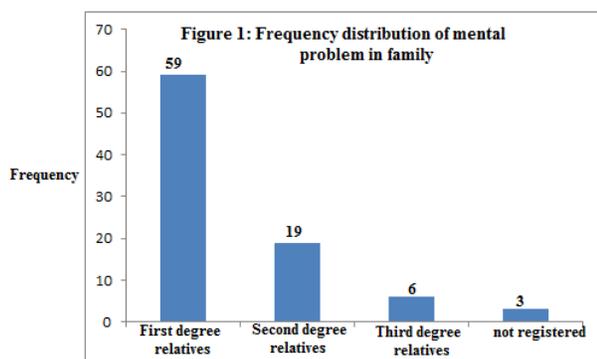
Possible contributing factors	Number	Percentage
History of head trauma	7	3.2
Veteran	11	5.0
Accident	9	4.1
History of alcohol abuse	17	7.8
History of smoking	89	40.8
History of substance abuse	57	26.1
History of imprisonment	25	11.5
Total	215	100

Among the 11 veterans, only 4 of them had their rate of injury in their files which was between 15% and 40%. Among 57 patients who were dependent to substance, 15 patients did not specified type of substance they used but 6 patients had used all kinds of substance, 9 patients were more dependent to glass (shisheh), 16 patients used opium predominantly, 4 and 5 patients were also addicted to heroin and tramadol and hashish, respectively. In term of Occupation, most of the patients were housewives (30.7%), unemployed or students (29.8%). Total number of patients with diploma was more than other levels (28.0%) and the lowest rate belonged to college degree (14.2%) (Table 2).

**Table 2.** Frequency distribution of occupation and education level in BMD patients admitted to Farabi hospital of Kermanshah (2001-2015)

Occupation and education level	Number	Percentage
Housewife	67	30.7
Employee	18	8.3
Worker	38	17.4
Self employed	30	13.8
Unemployed and student	65	29.8
Total	215	100
Illiterate	34	15.6
Primary	48	22.0
High school	44	20.2
Diploma	61	28.0
College	31	14.2
Total	218	100

9 patients with BMD had history of substance abuse in their family. Also, 87 patients had history of mental problem in their family; among whom, 9 patients were diagnosed with BMD, 10 patients had mental problem, and 68 patients also had unknown mental issues. What is more, the highest frequency of mental problem in the families of these 87 patients belonged to their immediate family members (Figure 1). History of BMD in family of all the 9 patients belonged to their immediate family members, as well. From a total of 218 patients, 70 (32.1%) had history of physical illness (history of seizure, most frequently), added to BMD (Table 3). Other types of illness were observed in less than 5 cases. Also, 23 out of 218 patients (10.6%) had history of different kinds of surgeries.



**Figure 1.** Family history of mental problems in BMD patients admitted to Farabi hospital of Kermanshah (2001-2015)

**Table 3.** History of physical illness in BMD patients admitted to Farabi hospital of Kermanshah (2001-2015)

Type of illness	Number and rate of recurrences recorded in patients' files
History of seizure	10 cases (4.6%)
History of hypothyroidism	8 cases (3.7%)
Fatty liver	5 cases (2.3%)
Shortness of breath	5 cases (2.3%)
Total other illnesses	42 cases (19.3%)
No history of other problems	148 cases (67.9%)

Among 58 patients who were residents of rural area, 8 patients were from villages of Islam Abad and 7 patients were from villages of Javanrood. Also, among 160 (73.4%) patients who were residents of urban area, after Kermanshah which had 83 patients, the second highest number (13 patients) belonged to Islam Abad.

Also, by performing U-Mann-Whitney tests (since it does not follow normal distribution) and ANOVA with a significant level of 0.05 which examines the difference between total number of patients

admitted to hospital and binomial and multivariate qualitative variables-such as gender and occupation-we found that, average number of admissions was different only among history of just smoking ( $P<0.001$ ), history of drug abuse ( $P<0.004$ ), and history of addiction in the family ( $P<0.03$ ). Number of admissions among smokers, substance abusers, and those who had history of substance dependency in the family was more than non-smokers and patients without substance dependency and without family history of substance dependency (Table 4). It should be noted that these tests were performed on 210 out of 218 patients whose total number of admissions were recorded.

**Table 4.** Mean and standard deviation of the number of hospital admissions based on smoking, addiction and history of addiction in family of patients' admitted to Farabi Hospital of Kermanshah (2001-2015)

Patients	Mean	SD	P
Smokers	6.2	6.1	0.00
Non-smokers	3.6	2.4	
Addicts	5.7	4.3	0.003
Non-addicts	4.3	4.6	
Family history of dependency to substance	11.0	11.8	0.02
Without family history of dependency to substance	4.4	3.7	

**Discussion**

In most studies, male patients with BMD are more female ones. For example, in Van Zaane et al. a research was conducted on 375 patients with BMD, among whom 74% were male (6). In a similar manner, Shahrabaki et al. examined 121 patients with BMD, among whom 85.1% were male (7). In the current research, 59.6% of patients were also male which indicates consistency of the obtained results. In the research carried out by Shahrabaki et al. 58% of 121 patients were single, widowed or divorced (7). In the current research, 54.1% were in the same group which shows no significant difference between the two researches. In most studies, patients with BMD have an average age about 40 years. For instance, Chapel et al. carried out a research on 825 patients on June 2016 with average age range of  $41.6\pm 12.1$  years (8). In the present study, the average age range of patients was  $39.6\pm 12.9$  years which also showed no significant difference. In addition, in the research by Chapel et al., average age at onset of the disease was  $28.1\pm 11.0$  years and in the present study was  $27.63\pm 12.1$  which also showed no significant difference, as well. The difference between current research and Chapel et al. study was the average

number of admissions;  $4.7 \pm 4.5$  and  $1.1 \pm 1.5$ , respectively (8). Number of admissions in the former research is much more than the later research which may be due to medication use culture and different individuals' compliance with physician's instructions. High cost of treatment in Iran may lead to non-compliance and frequent recurrence of the disease. Van Zaane et al. found no difference between education level and occupation of the patients (6) but in our research, patients with diploma were most frequent ( $n=61$ , 28.0%). Also, 60.5% of patients of this study were housewife, student, and unemployed; i.e. those who were not involved in doing jobs and social activities. In BMD patients, disorders of the hypothalamic pituitary adrenaline axis are outstanding in depression and dementia. Studies on immediate relatives of patients with BMD indicate that impaired endocrine system may be a vulnerable genetic factor in these patients (9). In a research by McElroy et al. 56% patients had history of the disease in their immediate family members (10). In our study, out of 87 patients with a history of psychological problems in family, 59 of them had an immediate family member with psychological problem. In the research by Chapel, high number patients were smokers (41.5%) (8) who

constituted 40.8% of patients in the current research. In the research by McElroy et al. (2001), 47% of patients had history of drug abuse (10). In our research, 26.1% of patients were dependent to substances. Perhaps, lower substance abuse statistics in Iran is due to unreal statement of truth.

### Conclusion

Based on the findings of this study, on average, about 15 patients with BMD were admitted to this hospital in each year. It seems that, in addition to drug therapy, there should be plans and more facilities for psychotherapy and educating patients and their families, especially in urban areas and families with history of dependency to substance and smoking.

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