



Journal of Fundamentals
of Mental Health



Mashhad University
of Medical Sciences



Psychiatry and Behavioral Sciences
Research Center

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

Please cite this paper as:

Rezaei M, Rahmani Sh, Hashemi SR, Farnia V. Bipolar mood disorder cases hospitalized in Farabi hospital of Kermanshah city (western part of Iran): 15-years survey (2001-15). *Journal of Fundamentals of Mental Health* 2017 Sep-Oct; 19(5): 575-580.

Introduction

Today, for different reasons, psychological tensions have increased, so the prevalence of various mental illnesses has remarkably grown. One of the most important types of mental

illnesses is mood disorders which include major depressive disorder and Bipolar Mood Disorder (BMD) (1). Bipolar mood disorder (manic-depression) is one of the most common psychiatric illnesses. Based on the "Disability

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Received: Mar. 04, 2017

Accepted: Jul. 26, 2017

Adjusted Life Years (DALY)" scale, it was ranked sixth among the top 10 causes of disability in 1990 (2). In this disease which usually occurs after adolescence, mood disorder is so severe that it causes a lot of damage 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, and 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 the 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, the high number of hospitalized patients, high 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 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 a history of hospitalizations before 2001 were excluded.

A convenient sampling method was selected for this research, and sampling units were the patients' records. 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 descriptions 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 whose 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%) were male, and 54.1% were single, divorced, or widowed. Patients' ages ranged from 18 to 83 years, with a mean age of 39.6 ± 12.9 years. Among these, 200 patients aged between 20 and 59 years. The mean age at onset of BMD was 27.6 ± 12.1 years. Fourteen patients did not know their age at the onset of the disease.

Of 218 patients enrolled in this survey, the total number of admissions of 8 patients was unknown, but for the rest of 210 patients, the 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 discharged in their hospital records. After contacting those who had call numbers, 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 were affected by a sudden stressor such as a bad event (e.g., death of loved ones) or a good event (e.g., marriage and childbirth).

The distribution of stressors and possible factors contributing to bipolar mood disorder showed that the highest frequency was related to a 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 were between 15% and 40%. Among 57 patients who were dependent on the substance, 15 patients did not use the specified type of substance they used, but 6 patients had used all kinds of substance, 9 patients were more dependent on glass (shisheh), 16 patients used opium predominantly, 4 and 5

patients were also addicted to heroin and tramadol and hashish, respectively. In terms of occupation, most of the patients were housewives (30.7%), unemployed, or students (29.8%).

The total number of patients with a diploma was more than other levels (28.0%), and the lowest rate belonged to a 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 |

Nine patients with BMD had a history of substance abuse in their families. Also, 87 patients had a history of mental problems in their family; among whom, 9 patients were diagnosed with BMD, 10 patients had mental problems, and 68 patients also had unknown mental issues. What is more, the highest frequency of mental problems in the families of these 87 patients belonged to their immediate family members

(Figure 1). History of BMD in a family of all 9 patients belonged to their immediate family members, as well. Of a total of 218 patients, 70 (32.1%) had a 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 a history of different kinds of surgeries.

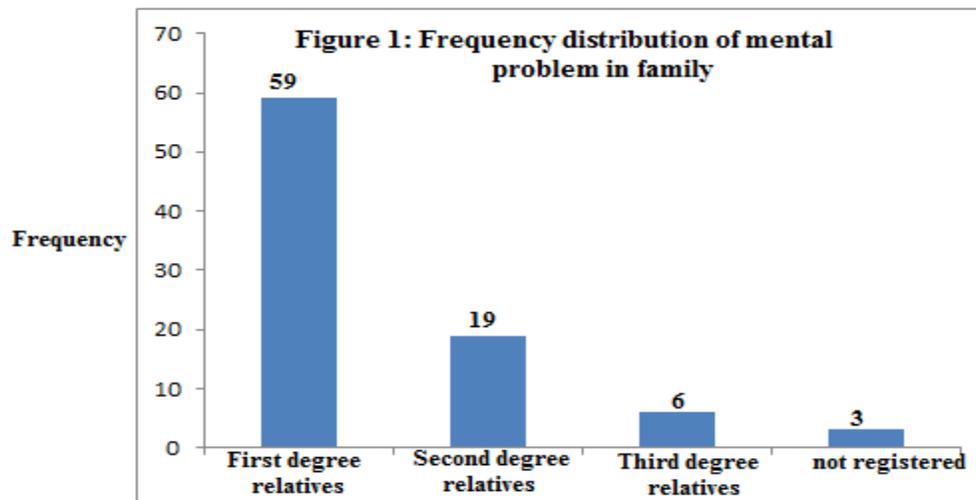


Figure 1. Family history of mental problems in BMD patients admitted to Farabi hospital of Kermanshah (2001-2015)

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 areas, 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 the 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 a normal distribution) and ANOVA with a significant level of 0.05 which examines the difference between the total number of patients admitted to the hospital and binomial and multivariate qualitative variables-

such as gender and occupation- we found that average number of admissions was different only among the history of just smoking ($P<0.001$), history of drug abuse ($P<0.004$), and history of addiction in the family ($P<0.03$). The number of admissions among smokers, substance abusers, and those who had a history of substance dependency in the family was more than among non-smokers and patients without substance dependency and without a 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 was recorded.

Table 4. Mean and standard deviation of the number of hospital admissions based on smoking, addiction, and history of addiction in a 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 than female ones. For example, Van Zaane et al. 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 the 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 of about 40 years. For instance, Chapel et al. carried out research on 825 patients on June 2016 with an average age range of 41.6 ± 12.1 years (8). In the present study, the average age range of patients was 39.6 ± 12.9 years which also showed no significant difference. In addition, in the research by Chapel et al., the average age at onset of the disease was 28.1 ± 11.0 years and in the present study was 27.63 ± 12.1 , which also showed no significant difference, as well. The difference between the current research and the Chapel et al. study was the average number of admissions; 4.7 ± 4.5 and 1.1 ± 1.5 , respectively (8). The number of admissions in the former research is much more than in the later research, which may be due to medication use culture and different individuals' compliance with physicians' instructions. The 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 the education level and occupation of the patients (6), but in our research, patients with a diploma were the most frequent ($n=61$, 28.0%). Also, 60.5% of patients in this study were housewives, students, 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 an impaired endocrine system may be a vulnerable genetic factor in these patients (9). In research by McElroy et al., 56% of patients had a history of the disease in their immediate family members (10). In our study, out of 87 patients with a history of psychological problems in the family, 59 of them had an immediate family member with a psychological problem. In the research by Chapel, the high number of 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 a history of drug abuse (10). In our research, 26.1% of patients were dependent on substances. Perhaps, lower substance abuse statistics in Iran are due to an unreal statement of truth.

Conclusion

Based on the findings of this study, on average, about 15 patients with BMD were admitted to this hospital 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 a history of dependency on substances and smoking.

Acknowledgments

This paper is taken from the MA thesis of the second author, No. 95045. The researchers wish to thank the Deputy of Kermanshah University of Medical Sciences for approving this project, as well as all staff members of the reception and archive units of Farabi Hospital (affiliated with Kermanshah University of Medical Sciences) who cooperated with us in collecting the patients' data.

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