Comparison of Demographic and Diagnostic Characteristics of Iranian Inpatients With Bipolar I Disorder to Western Counterparts

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Background: Patients' characteristics influence the disorders outcome, so it is valuable to compare mood disorders and inpatients' attributes in different large samples.
Objectives: This study was designed to assess demographic and diagnostic characteristics of 3000 Iranian inpatient with bipolar disorders.
Patients and Methods: We collected the information of demographic, clinical, and therapeutic characteristics of the patients who were hospitalized in Iran Hospital of Psychiatry, a university affiliated hospital in Tehran, during the 5 years from 2006 to 2011.
Results: About 66.1% of the subjects were males and 33.9% were females. Iranian patients are characterized by a higher rate of unemployment, being more single, having health insurance and lower rate of divorce and education compared to the other clinical samples. In the majority of the patients, the disorder had begun with manic phase.
Conclusions: Clinical and therapeutic features of Iranian patients are different from patients in western countries.

Keywords: Bipolar I Disorder; Demographic Survey; Diagnostic Characteristics

1. Background

Mood disorders, including unipolar and bipolar disorders, are the most frequent psychiatric disorders both in the clinical settings and community. According to the previous studies, the lifetime prevalence rate of major depressive disorder was between 4.9% and 20% and the lifetime prevalence rates of bipolar I and II disorders have been reported to be between 1.3% and 3.9% (1).

Bipolar disorders are associated with serious complications such as increased risk of other psychiatric Axis I and II comorbidities, especially alcohol and substance use disorders, and increased rates of somatic morbidity and mortality. They also have disruptive effects on quality of life, productivity and daily functioning (1-12). Besides, bipolar disorders are associated with high risk of both completed and attempted suicide (13-15).

In the Global Burden of Disease Study, bipolar disorder was ranked as the eighth leading cause of medical disability worldwide (16). Furthermore, a majority of bipolar patients were reported to suffer from high relapse rates even during mood stabilizer treatments (17). These features lead to burnout in family and have hazardous effects on society (5-17).

As patients' characteristics influence the disorders outcome (18), it is valuable to investigate mood disorders in patients of different large samples, and compare their properties with features. There are articles that reported demographic and clinical features of these patients in the western countries (8-12, 18-23), but in Iran we have limited data in this regard. According to some studies, the course of mood disorders is somehow different in Iranian patients. For instance, unlike other studies, in the majority of Iranian bipolar patients, the disorder begins with manic phase. This confirms the need for further researches in order to gather more information (24, 25).

2. Objectives

This study was designed to assess demographic and diagnostic characteristics of 3000 Iranian inpatients with bipolar disorders in a psychiatric hospital.

3. Materials and Methods

In this retrospective cross-sectional study, we collected the files information of inpatients hospitalized from 2006 to 2011, Iran Hospital of Psychiatry, a university affiliated hospital in Tehran, Iran. The hospital is located

7 km out of Tehran (Karaj road). It offers inpatient and outpatient services to all clients from all over the country, especially the west of Tehran. It has 130 beds, 1 emergency department with 22 beds, 3 wards for men with 90 beds and 1 ward for women with 30 beds. Bed occupancy of this hospital is about 100%.

The patients diagnosed as bipolar disorders in first hospitalization by expert psychiatrists (faculties of Iran University of Medical Sciences) were enrolled in the study. Diagnosis was made based on the 4th edition of Diagnostic and Statistical Manual of Mental Disorders (DSM-TV-TR) criteria and through unstructured interviews.

A total of 3000 patients with diagnosis of bipolar I disorder were hospitalized in Iran Hospital during the mentioned time. Demographic, clinical, and therapeutic characteristic of the patients including age, gender, date and place of birth, home address, marital status, number of children, occupational status, educational status, insurance status, age of first episode, age of first hospitalization, type of first episode, number of hospitalizations, duration of each hospitalization, psychiatric diagnosis during each hospitalization, type of treatments (medical treatments, electroconvulsive therapy) during each hospitalization were collected by checking their hospital files. Data investigation took 6 months.

Data analysis was performed with SPSS for Windows (version 21.0, SPSS Inc., Chicago, IL, USA) and we used descriptive statistics for quantitatively describing the features. This study was approved by the Ethical Committee of Psychiatric Department of Iran University of Medical Sciences and confidential records were kept at a secure area with limited access, and stripping them of identifying information was considered.

4. Results

About 66.1% of subjects were men and 33.9% were women. The majority of the patients was unemployed and had lower than high-school degrees. Demographic characteristics and clinical features are presented in Table 1.

5. Discussion

In this study, the age of disease onset was 27.9 ± 0.19 y and age of their first hospitalization was 32.5 ± 0.2 y. Men were admitted more than women in the hospital. Less than half of inpatients with BID (Bipolar I Disorder) were married. Low educational level and high health insurance coverage and unemployment rate among them were considerable.

In Kupfer et al. study, 64.5 out of 3000 bipolar patients were women, and the mean age of onset was 19.8 years. Over 60% completed college and 64% were currently unemployed (23). In Iran Hospital, the number of men beds was triple of women beds and this was the reason why the majority of our patients were men.

The data of this study were compared to Suppes et al. (26), Lish et al. (27), Regier et al. (28) and Kogan et al.

studies data (18) (Table 2). Our results are in conflict with western studies in a number of features, many of them may reflect cultural and society differences. As it is presented in Table 2, the Iranian patients are characterized by a higher rate of unemployment, being single, having health insurance and lower rate of divorce and education compared to the other clinical samples.

Table 1. Demographic Characteristics and Clinical Features of Bipolar I Patients [a]

Variable	Value
Total	3000
Age at onset; y	27.9 ± 0.19
Age at first admission; y	32.5 ± 0.2
Gender	
Male	1984 (66.1)
Female	1016 (33.9)
Marital Status	
Married	1414 (47.1)
Single	1258 (41.9)
Divorced	328 (10.9)
Education degree	
Illiterate	173 (5.8)
Under diploma	1747 (58.2)
Diploma	828 (27.6)
University degree	252 (8.4)
Had health insurance	2778 (92.6)
Occupation status	
Clerk	139 (4.6)
Worker	346 (11.5)
Self-employed	361 (12)
Retired	67 (2.2)
Unemployed	1433 (47.6)
Housewife	654 (21.8)
Admission No	2.39 ± 0.04
Mean duration at admission, d	32.1 ± 0.21
Number of admission with ECT [b]	0.39 ± 0.01
Index episode	
Mania	1953 (65.1)
Depressive	910 (30.3)
Mixed	81 (2.7)
Others	56 (1.9)

[a] Data are presented as Mean ± SD, and No. (%).
[b] Electroconvulsive therapy.

Table 2. The Comparison of Demographic Characteristics of This Sample to the Findings of Western Studies [a]

Variable	The present study	Suppes et al. (26)	Lish et al. (27)	Regier et al. (28)	Kogan et al. (18)
Sample size	3000	261 bipolar disorders, 216 BID	500	20000	1000
Age at onset; y	27.9 ± 0.19	22.16 ± 9.6			17.4 ± 8.6
Age at first admission; y	32.5 ± 0.2	29.46 ± 10.7			
Gender					
Female	33.9	56	63	57	58.6
Marital status					
Married	47.1	43	46	44	36.2
Single	41.9	31	25	22	35.2
Divorced	10.9	24	28	15	23.5
Educational level					
Illiterate	5.8				
Under diploma	58.2				
Diploma	27.6		5	22.7	13.8
University	8.4		55	28.6	82.3
Health insurance status					
No health insurance	7.4	14			
Employment status					
Unemployed	47.6	6			22.0
Index episode					
Mania	65				26.1
Depressive	30.3	25			52.0
Mixed	2.7	48			21.0
Others	1.9				0.9

[a] Data are presented as Mean ± SD, or (%).

High rates of unemployment, lower education and being single perhaps are due to the stigma and insufficient social resources for patients with mental disorders in Iran. Also, it could be due to the higher prevalence of these attributes in the Iranian general population than western populations. Furthermore, Iran Hospital is located in a low socioeconomic region, outside of Tehran and the economic and educational properties of the patients of this study could not be generalized to all the psychiatric inpatients of Iran.

Age of onset and the first admission were also higher than those of other studies. Overlooking the symptoms of mania, lack of insight into manic symptoms, and recall bias could be the reasons of higher age of onset. In addition, misdiagnoses and the stigma as a barrier to on time hospitalization may be the causes of higher age of first admission.

In the majority of the patients, the disorder had begun with manic phase (24, 25), which is consistent with the data of previous Iranian studies on bipolar patients and in contrast to studies in western countries. Some reasons such as more acceptability and tolerability of depressive symptoms rather than behaviorally disruptive manic epi-

sodes or overlooking of depressive symptoms by mental health system professionals, patients, and their families could perhaps justify these results. Bed occupancy is high in Iran Hospital. Hence, it is possible that patients with mild form of disease, especially depressed patients have not been admitted regarding the hospital priority for admitting aggressive manic patients. Depression was higher in the women and the number of female beds was one third of male beds. So it can be another reason that mania was the prominent feature of the disorder. Furthermore, all the other studies were carried out on outpatients and this could be another explanation for differences of types of episodes. According to Jablensky study on severely ill hospitalized patients in Germany, (100 years ago) most "index" episodes were mania (29).

In a study on hospitalized bipolar patients in Finland, the corresponding peak of 1-year incidences for a bipolar depressive episode occurred at the same age, was about half of that reported for mania (30). On the other hand, in a study carried out on 8,889 psychiatric inpatients, 52.1 out of 1938 bipolar patients were men and almost 50% of patients were in depressed episode (31). It seems that the findings in the literature are conflicting and difficult to

reconcile, so it is highly recommended to design more studies aiming to investigate probable etiologies such as genetics.

Rate of health insurance shows the better medical insurance coverage in Iran than western countries; however long waiting lists of state-run hospitals, increasing healthcare costs and poor insurance coverage of private outpatients' services should not be disregarded.

Retrospective method and lack of a standard diagnostic instrument were the limitations of this study. In addition, this study was conducted based on the data from medical records of inpatients and lacked appropriate assurance of quality and consistency of collected data. However, considering that the hospital was a university affiliated residency training center and the diagnosis was based on DSM-IV-TR criteria, authors would assume acceptable requirements for using those findings. It is highly recommended to design future outpatient studies in order to review clinical features of bipolar outpatients and compare them with studies in other countries.

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Authors' Contributions

Atefeh Ghanbari Jolfaei and Amir Shabani conceived and designed the evaluation. Pari Ghadamgahi collected the clinical data. Atefeh Ghanbari Jolfaei interpreted the clinical data and Masoud Ahmadzad-Asl performed the statistical analysis. Atefeh Ghanbari Jolfaei drafted the manuscript. All authors read and approved the final manuscript.

Declaration of Interest

None declared.

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