

# Descriptive Analysis of admissions to Bahrain Psychiatric Hospital: A Retrospective Study

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## ABSTRACT

**Objective:** To assess the pattern of serious mental illnesses in Bahrain.

**Design:** A Retrospective Cross-Sectional Study.

**Setting:** General adult in-patient psychiatry wards, Psychiatric Hospital, Ministry of Health, Bahrain.

**Method:** One hundred and eighty patients were included in the study from January to June 2019. The inclusion criteria were 18-65 years and those who had first contact with the psychiatric hospital. Patients with a known history of substance abuse were excluded.

**Result:** The majority of cases suffered from schizophrenia and related psychoses 114 (63.3%), bipolar affective disorder 33 (18.3%), and depressive disorder 11 (6.4%).

**Conclusion:** Males, younger age, and individuals with low education and income were all at risk of admission to the psychiatric hospital.

**Keywords:** Psychiatric, Schizophrenia, Serious Mental illness, Depressive disorder

## INTRODUCTION

Many epidemiologic studies and surveys were conducted globally to study the prevalence of psychiatric disorders and their burden on different countries<sup>1</sup>. A study has shown the IQR(inter-quartile range) of lifetime common psychiatric disorders combined to be 18.1-36.1<sup>2</sup>. However, prevalence of Serious Mental Illness (SMI) vary from country to another. Many of the major psychiatric disorders begin at a young age and have a great burden on the family and society.

A study done among Bahraini citizens attending the outpatient clinics at The Psychiatric Hospital-Bahrain, showed that the majority among them suffered from depression (33.4%), anxiety disorders (19.9%) and psychotic disorders(14.8%)<sup>3</sup>. Another study done in Saudi Arabia have shown similar results among patients attending the outpatient department; major depressive disorder (29.3%), schizophrenia (28.9%), generalized anxiety disorder (15.6%) and bipolar disorder (11.5%). However, commonest disorders among inpatients were schizophrenia (55.8%), bipolar disorder (23.3%) and major depressive disorder (7.2%)<sup>4</sup>.

A systematic review study has shown that mental disorders are among the highest causes of mortality globally. The burden of mental illness is growing steadily and needs to be addressed seriously<sup>5</sup>. Psychiatric patients do not usually die of the disease itself, however they die from the complications of the illness (e.g. suicide, hypertension, heart disease, diabetes etc.)<sup>6</sup>. In patients had higher mortality rates than among outpatients because inpatients have more severe and advanced

stage of mental disorders and more comorbid medical conditions<sup>7</sup>. The life expectancy is less for psychiatric patients than the general population.

The aim of this study is to identify the pattern of different psychiatric disorders, the sex distribution, age pattern, nationality, religion as well as the social and educational level of the inpatients admitted to The Psychiatric Hospital- Bahrain.

## METHOD

The ethical approval was taken from the Ministry of Health in Bahrain to conduct this study. All the cases admitted to The Psychiatric Hospital-Bahrain from the period January 2019 to June 2019, were included in the study. These cases were diagnosed using ICD-10 criteria. One hundred and eighty cases were included in the study. The exclusion criteria were the cases above sixty-five and younger than eighteen as well as substance abuse disorders patients.

The following data were recorded: age, sex, nationality, marital status, employment, social and educational level, religion, time taken to transfer the patient from accident emergency department to the inpatient ward, source of referral, means of transport and the diagnosis.

Data were entered into a Microsoft Excel Sheet. The data were mainly analyzed in a descriptive manner using frequency and percentages using STATA 16.1, P-Value < 0.05 was considered statistically significant.

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**RESULT**

One hundred and eighty (180) patients were included in our study; 100(55.56%) were 18-35 years. See Table 1. Majority of cases admitted to the hospital were males (63.89%). See Table 2. One hundred twenty-eight (71.11%) were Bahrainis. See Table 3. Only seventy-two (40.00%) were married. See Table 4. Majority (85.00%) were Muslims. Most of them were from lower social class; 71 (39.44%) were from class 5 and 36 (20.00%) were from class 4. Only sixty-eight (37.78%) were employed. See Table 5. Only thirty-six (22.00%) patients spent less than 6 hours in the accident and emergency department before admission. See Table 6. Seventeen (9.44%) patients were admitted from outpatient department in our hospital. See Table 7. Fifty-two (28.89%) of patients were initially assessed by accident and emergency doctors and then referred for assessment of a psychiatrist. See Table 8. Most of the known psychiatric cases 76 (42.22%) were brought to accident and emergency department by their families. See Table 9. Only very few patients 15 (8.33%) came to accident and emergency department by themselves. Most of them 122 (67.78%) came to emergency department by their private cars. Most of the cases 114 (66.28%) suffered from a psychotic disorder including schizophrenia (37.79%), delusional disorder (2.33%) as well as acute psychotic episode (21.51%). See Table 10. On the other hand, thirty-three patients (18.22%) suffered from bipolar affective disorder. The most frequent presentation of bipolar affective disorder was a depressive episode (13.37%). Only 11 patients (6.40%) were admitted with a major depressive disorder. A low fraction of patients had a dual diagnosis (4.40%).

Table 1 shows that the majority of the participants were between the 18 and 35 years of age.

**Table 1:** Age of participants

Age	N (%)
18-35 Years	100 (55.56%)
36-50 Years	44 (24.44%)
51-65 Years	36 (20.00%)

Table 2 shows that most of the admitted patients were males. Female: male ratio is 0.56: 1.00.

**Table 2:** Sex and nationality of participants

Sex	N (%)
Female	65 (36.11%)
Male	115 (63.89%)

Table 3 shows that the majority of patients were Bahrainis.

**Table 3:** Nationality of participants

Nationality	N (%)
Bahraini	128 (71.11%)
Non-Bahraini	52 (28.89%)

Table 4 shows that almost half of the participants were single.

**Table 4:** Marital Status of participants

Marital Status	N (%)
Married	72 (40.00%)
Separated	19 (10.66%)
Single	89 (49.44%)

Table 5 shows that 37.78 % were employed and only 3.89% were student, the national statistics of unemployment are 4.09% in 2020.

**Table 5:** Employment of participants

Employment	N (%)
Employed	68 (37.78%)
Retired	21 (11.67%)
Un-employed	60 (33.33%)
Student	7 (3.89%)
House wife	20 (11.11%)
Un known	4 (2.22%)

Table 6 shows the social classes of the participants according to Hollingshead and Redlich criteria. Most of them were from class 5, 3 and 4.

Cultural Characteristic and Class Status (Redlich &Hollingshead)<sup>12</sup>:

**Class 1:** Community business and professional leaders

**Class 2:** Education beyond high school, occupation as manager-lesser ranking professional

**Class 3:** High school graduates, administrative and clerical job

**Class 4:** Education less than high school and more than Primary level working class, semi-skilled and skilled

**Class 5:** Education-Primary school and less, unskilled workers or unemployed

**Table 6:** Social Class of participants

Age	N (%)
SC1	1 (0.56%)
SC2	24 (13.33%)
SC3	48 (26.67%)
SC4	36 (20.00%)
SC5	71 (39.44%)

Table 7 shows the source of referral of participants to the psychiatric hospital.

**Table 7:** Source of referral of participants

Age	N (%)
A&E	52 (28.89%)
Self	15 (8.33%)
Family	76 (42.22%)
Help of Police	13 (7.22%)
Hospital (gov/private)	3 (1.67%)
Others	2 (1.11%)
OPD Clinic	19 (10.56%)

Table 8 shows the means of transport to the emergency department. Most were by a private car.

**Table 8:** Transport to Emergency department of participants

Age	N (%)
By Ambulance	39 (21.67%)
By Private car	122 (67.78%)
By Police car	8 (4.44%)
Not answered	11 (6.11%)

Table 9 shows the diagnosis of the patients admitted to the inpatient wards in our hospital.

**Table 9:** Diagnosis of participants

Single Diagnosis	N (%)
<b>Psychotic Disorders</b>	
Schizophrenia	65 (37.79%)

Delusional disorder	4 (2.33%)
Acute psychotic episode	37 (21.51%)
Schizo affective disorder	5 (2.91%)
Drug Induce psychosis	3 (1.74%)
<b>Bipolar affective disorder</b>	
Currently depressive episode	23 (13.37%)
Currently manic episode	5 (2.91%)
Currently mixed episode	5 (2.91%)
<b>Major depressive disorder</b>	
Depressive episode	11 (6.40%)
<b>Anxiety disorders</b>	3 (1.74%)
<b>Dissociative disorder</b>	3 (1.74%)
<b>Personality disorder</b>	1 (0.58%)
<b>Others</b>	4 (2.33%)

**Table 10: Dual diagnosis of participants**

Dual	N (%)
Schizophrenia with depression	2 (25.00%)
ID and currently manic episode	1 (12.50%)
Depression with suicidal attempt	1 (12.50%)
Bipolar affective disorder with mental	1 (12.50%)
Bipolar affective disorder with personality	1 (12.50%)
Acute psychotic episode with alcohol withdrawal	1 (12.50%)
Schizophrenia with OCD	1 (12.50%)

**DISCUSSION**

Mental disorders are estimated at the top of global burden of diseases in 2020<sup>8</sup>. They affect the total lifespan expected as well as the social functioning of the individual<sup>9</sup>. This may vary from country to country. Mental disorders are common in Bahrain and this needs to be addressed nationally both in terms of available resources as well as financial costs. This study continues to discover the socio-demographic characteristics of the psychiatric patients admitted to the only major public psychiatric hospital in Bahrain. We also to compare our results with similar studies done in the region as well as globally.

We found that most of the patients (63.89%) admitted to the inpatient wards were males. Similar results were found in a study done in Saudi Arabia (56.90%)<sup>4</sup>. In comparison to the patients followed in the outpatient department in our hospital, less number of patients were married (40.00%) vs (62.30%) which might indicate a more serious mental impairment among patients admitted to the inpatient ward. The cases seen in the outpatient are mainly diagnosed to have depression or anxiety disorders (51.50%).

However, in the inpatient wards most patients either suffered from a psychotic disorder (66.28%) or a bipolar affective disorder (18.22%). Patients with a major mental disorder have worse social functioning as well a worse long-term prognosis of the disease. The level of employment among inpatients (37.80%) is comparable to outpatients (42.00%). Most of inpatients were taken to accident and emergency department either by ambulance or by family (71.10%), whereas most of the outpatients were referred from the local health center (58.00%)<sup>3</sup>. The ratio of Bahrainis to non-Bahrainis was similar between inpatients (71.11%) and outpatients (74.16%). Most of patients seen in the outpatient department were females (55.0%), whereas males were mostly among inpatients (63.89%).

The amount of time spent in accident and emergency department until admission to the ward varies from 2 hours to more than 10 hours. Most of the patients (78.00%) spend more than 6 hours in the accident and

emergency department before transfer to the ward. This time spent in the emergency department is stressful both to the patient and the family. This long time taken is taken because psychiatric patients are initially screened like any other case coming to accident and emergency department to rule out any other underlying medical cause and to do all necessary investigations and then the case is referred to the psychiatrist on call for assessment. It is known globally that psychiatric patients spend 3.2 times longer time than non-psychiatric cases in accident and emergency department<sup>10,11</sup>. This could be shortened in the future by opening a specialized unit in the accident and emergency department for assessing psychiatric cases as well as allocating a specialized psychiatric nurses and ambulance team to bring the psychiatric patients from their homes to the emergency department.

**CONCLUSION**

**The majority of patients admitted to psychiatric hospital in Bahrain suffered from psychotic disorders followed by bipolar disorders an depression. Minority of patients had a dual diagnosis. The people at risk of being admitted to a psychiatric hospital are males, young adults and people with lower socio-economic class. This is the first study in Bahrain to investigate socio-demographic characteristics of inpatients. Future studies should assess relapse rate, time taken in every admission and expected complications and challenges from treatment in the ward.**

**Author Contribution:** All authors share equal effort contribution towards (1) substantial contributions to conception and design, acquisition, analysis and interpretation of data; (2) drafting the article and revising it critically for important intellectual content; and (3) final approval of the manuscript version to be published. Yes.

**Potential Conflicts of Interest:** None.

**Competing Interest:** None.

**Acceptance Date:** 07 December 2021

**Sponsorship:** None.

**Ethical Approval:** Approved by the Research and Ethics Committee in the Ministry of Health, Bahrain.

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