

Pattern of Psychiatric Admissions to the Psychiatric Hospital, Jimma University Medical Center, Ethiopia

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ABSTRACT

Mental illness is a leading cause of disability. However, little reliable and valid epidemiological information is available on mental disorders, but we need such information if we want to improve mental health care services for the mentally ill. Therefore, we conducted the current study to obtain information on the sociodemographic and illness characteristics of people admitted to the psychiatric clinic at Jimma University Medical Center, Ethiopia. We performed a retrospective descriptive analysis of data on admissions to the clinic from July 1, 2018 to July 1, 2019. Cases were admitted by mental health specialists and all admitted cases were included. Data were analyzed with the Statistical Package for Social Sciences 22 for Windows 7. Admission rates were described with cross-tabulation and frequency statistics. In the study period, 265 patients were admitted, 68.3% (n=181) of whom were men. The mean (SD) age was 27 (8) years, and the largest group (n=105, 39.6%) was aged 25-34 years. The most common psychiatric diagnosis was schizophrenia (n=100, 37.7%), followed by bipolar disorder, (n=79, 29.8%) and major depressive disorder with psychotic features (n=37, 14.0%). The mean length of hospital stay was 26 days. In Ethiopia, only limited data are available on admissions for psychiatric disorders, particularly in general hospitals that provide psychiatric services. The data on patterns of psychiatric admissions to a general hospital in Ethiopia obtained in this study will help improve clinical decision making and service delivery.

Keywords: Psychiatric admission, Jimma University Medical Center, Ethiopia

INTRODUCTION

Mental illness is a leading cause of disability and constitutes 14% of the overall burden of disease (measured in disability adjusted

life in years) and 28% of the non-communicable disease burden (1). Mental disorders account for a third of the years lived with disability by adults globally and are five of the ten leading causes of disability (2). More than 80% of people with mental disorders

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live in low- and middle-income countries (LMIC), and in these countries mental illness and substance abuse disorders (SUD) account for 8.8% and 16.6% of the total burden of disease, respectively (3,4). In Sub-Saharan Africa, the added social alienation that results from the stigmatization of mental, neurological, and substance use disorders exposes people with a mental illness to abuse and economic impoverishment (5). In Ethiopia, among the non-communicable diseases mental illnesses cause the most burden, i.e. 11% of the total burden of disease, with schizophrenia and depression being among the top 10 most burdensome conditions (6).

The World Mental Health Survey conducted by the World Health Organization suggests that the treatment gap for severe mental disorders in LMIC can be as large as 75% (7). About 80% of people with neuropsychiatric disorders, such as epilepsy, are from LMIC, and about six out of 10 of them do not receive any treatment (8). Mental disorders are associated with considerable disability for patients and a high burden for patients' families (9). In Ethiopia, only 10% of people with severe mental disorders ever receive effective care (6).

Psychiatric patients are predominantly admitted for inpatient treatment when they act in a disorganized manner or have psychotic features or when life at home becomes problematic (10). Inpatient treatment of the mentally ill, although costly and resource demanding, is still the safest and most effective mode of treatment for patients who are unmanageable at home or in the community (10). The majority of patients with chronic mental illnesses remain hospitalized for long periods because of residual psychiatric symptoms, the need for rehabilitation and a lack of public facilities and halfway houses (11).

The issue of hospital utilization, i.e. the way in which a certain community makes use of its hospital resources (12), is compounded by the lack of adequate epidemiological information on mental illnesses. In Ethiopia, only limited data are available on admissions for psychiatric disorders, particularly in general hospitals that provide psychiatric services. Because there are limited numbers of psychiatric beds at Jimma University Medical Center, Ethiopia, it can be difficult to find the optimal balance between treating new psychiatric patients and treating those who need to remain in hospital for long periods. Appropriate understanding of patterns of admission would be a critical step in enlightening clinical decision making and improving service delivery. Therefore, we conducted the current study to retrospectively assess admissions to the psychiatric clinic at Jimma University Medical Center, Ethiopia, over a one-year period.

MATERIALS AND METHODS

Study setting

This study was conducted in the psychiatric clinic at Jimma University Medical Center. Jimma is the capital of Jimma zone, Oromia region, and is located 352 km (218.7 miles) southwest of Addis Ababa, the capital city of Ethiopia. Jimma University Medical Center is a teaching and tertiary level hospital and is the only referral hospital for the southwestern sub-region of the

country that provides inpatient and outpatient health services for the more than 15 million people living in southwest of Ethiopia. The hospital provides inpatient services in six clinical departments (internal medicine, surgery, obstetrics and gynecology, pediatrics, psychiatry, and ophthalmology) and outpatient services in clinics for chronic illness (diabetes, cardiovascular, asthma, epilepsy, tuberculosis, HIV, and psychiatric disorders), dermatology, other conditions, and dentistry.

The psychiatric clinic at Jimma University Medical Center has 24 beds for general psychiatric patients and an additional 2 beds dedicated to substance abuse detoxification treatment. It also treats over one thousand outpatients each month. The aim of this study was to obtain information on the patients who were admitted to the inpatient facility from July 1, 2018 to July 1, 2019. The study was approved by the ethical review board of Jimma University Institute of Health.

Data collection and data analysis

The patient profile charts of all 265 patients admitted to the psychiatric clinic between July 1, 2018 and July 1, 2019 were reviewed by data collectors, who entered the information of interest into data extraction templates. The patients were diagnosed by mental health specialists. The data included socio-demographic variables (age, sex, religion, marital status, educational status, and ethnicity), type of mental disorder, substance use and type, and length of stay in the hospital. Data were collected without any personal identifiable information.

Data collection was monitored by supervisors. The data collectors were trained on the study objectives, how to complete the questionnaires, and how to maintain confidentiality of patient charts, and the supervisors were trained on the study objectives, what to check in completing data extraction templates, and how to help data collectors in case of queries when they were completing the data extraction template.

Trained data clerks used EpiDdata version 3.1 to enter the data from the extraction templates into a computer. The data were then exported to the Statistical Package for Social Sciences 22 and were properly filed and stored as both backed-up electronic copies and hard copies.

The extracted data were cleaned before data analysis. Then, descriptive statistics such as frequency, mean, and percentages were calculated.

RESULTS

Socio-demographic characteristics

A total of 265 charts were reviewed during the study period. The socio-demographic characteristics of the admitted patients are presented in Table 1. The majority of the patients were male. The mean (SD) age was 27 (8) years. Most of the admitted patients were in the group aged 25-34 years, followed by the group aged 15-24 years; most had only completed school to the end of grade 6 or 12; and almost half were single. Oromo was by far the most common ethnicity. The most common religion was

Muslim, followed by orthodox Christian and Protestant. Almost half of the patients were unemployed. The most common occupation was a farmer, followed by student and government employee.

Characteristic		N	%
Sex	Male	181	68.3
	Female	84	31.7
Age	<15	6	2.3
	15-24	94	35.5
	25-34	105	39.6
	35-44	35	13.3
	45-54	17	6.4
	55-64	6	2.3
	>64	2	0.7
Educational status	Illiterate	47	17.7
	Able to read & write	9	3.4
	Completed grade 1 to 6	98	37.0
	Completed grade 7 to 12	77	29.1
Marital status	Single	122	46.0
	Married	79	29.8
	Widowed	11	4.2
	Divorced	26	9.8
	Separated	27	10.2
Occupation	Unemployed	114	43.0
	Farmer	55	20.8
	Government employee	27	10.2
	Student	45	17.0
	Housewife	13	4.9
	Merchant	11	4.1
Ethnicity	Oromo	166	62.6

	Amhara	48	18.1
	Tigre	4	1.5
	Keffa	28	10.7
	Gurage	13	4.9
	Silte	3	1.1
	Other	3	1.1
Religion	Muslim	143	54.0
	Orthodox	82	30.9
	Protestant	35	13.2
	Catholic	5	1.9

Table 1: Socio-demographic characteristics of patients diagnosed with a psychiatric disorder

The most common DSM-IV diagnosis was schizophrenia, followed by bipolar disorder and major depressive disorder with psychotic features (see Table 2). The majority of patients with schizophrenia were men. Among the schizophrenia patients, n=52 (52%) were in the age range 25-34 years, n=52 (52%) had only completed grade 1 to 6 at school, and n=45 (45%) were unemployed. Bipolar disorder was more common among women. Most of the patients with bipolar disorder (n=31, 39.2%) were in the age range 15-24 years, and (n=30, 37.7% of the bipolar patients had completed grade 7 to 12.

The majority of the patients (n=199, 75.1%) used substances: 34.0% (n=90) used khat, tobacco, and alcohol; 26% (n=69), khat only; and 15.1% (n=40), both tobacco and khat. Among the patients with schizophrenia, 31% (n=31) used khat, tobacco, and alcohol. The mean (SD) length of stay in the hospital was 26 (16) days in the whole group and 28 days in the group of patients with schizophrenia.

Type of mental illness	Whole group, N (%)	Men, n (% of diagnostic group)	Women, n (% of diagnostic group)
Schizophrenia	100 (37.7)	85 (85.0)	15 (15.0)
Bipolar disorder	79 (29.8)	32 (40.5)	47 (59.5)
Major depressive disorder with psychotic features	37 (14.0)	29 (78.4)	8 (21.6)
Brief psychotic disorder	26 (9.8)	18 (69.2)	8 (30.8)
Catatonia	7 (2.6)	4 (57.1)	3 (42.9)

Psychotic disorder not otherwise specified	4 (1.5)	3 (75.0)	1 (25.0)
Khat-induced psychotic disorder	4 (1.5)	4(100.0)	0 (0.0)
Schizoaffective disorder	1(0.4)	1(100.0)	0 (0.0)
Others	7 (2.6)	5 (71.4)	2 (28.6)
Total	265 (100)	181 (68.3)	84 (31.7)

Table 2: Diagnoses of the mentally ill patients admitted to the Psychiatric Clinic ward

DISCUSSION

This retrospective study found that more men than women were admitted to the psychiatric clinic at Jimma University Medical Center, Ethiopia. Among both the men and women, most patients were in the age group 15-24 years, followed by the age group 25-34 years. Schizophrenia was the most common diagnosis, followed by bipolar disorder and major depressive disorder.

A study performed at Amanuel hospital in Ethiopia also found that nearly three-quarters of patients admitted for a mental illness were men and aged 30 years or younger (13). Likewise, 63% of admissions to Mathari Psychiatry Hospital in Kenya were men (14), and more men than women were admitted to the National Referral Hospital in Thimphu, Bhutan (15). The greater proportion of men than women being admitted to hospital for treatment of mental illness might be because men are more likely to use psychiatric services (16) and to turn to the specialized sector than to a general physician (17). Another reason for the higher number of admissions among men may be their higher rates of drug use; in our study, khat was the most commonly used drug. In addition, this may be due to cultural reasons, that in Ethiopia home treatment is preferred for women.

In line with our study, a study performed in Italy found that schizophrenia was the most common reason for hospital admission (18). In contrast, in a study at Helderbergh Hospital in South Africa mental and behavioral disorders due to psychoactive substance use were the leading cause of admission, and schizophrenia was the second most common (19); the reason for this difference may have been the high prevalence of psychoactive substance use in the hospital's catchment area.

In the current study, 37.7% and 29.8% of patients admitted with a diagnosis of schizophrenia and bipolar disorder, respectively, were aged 15 to 34. This finding is comparable to a study performed at Amanuel Hospital in Addis Ababa, Ethiopia (13). Schizophrenia and bipolar disorders generally occur for the first time in adolescents and young people in their twenties to mid-thirties (20), which likely explains the predominance of this

age group in our study. Drug use also starts most often at this age, and stress caused by academic failure and joblessness, which are more common in this age group, can worsen a mental illness (21, 22).

According to our chart review, the majority of patients had improved on discharge. The mean length of stay in the psychiatric clinic at the Jimma University Medical Center was comparable to findings from similar settings in sub-Saharan Africa (23, 24) but higher than data reported from developed countries (25).

A diagnosis of schizophrenia is a "predictor" of a longer hospital stay, which may explain the longer duration of hospitalization found in our study. Patients with schizophrenia are likely to present with severe and chronic untreated illness, which may in turn lead to slower treatment response. Making safe discharge arrangements for these patients can also be more difficult, especially when patients are from rural parts of southwest Ethiopia.

Our findings have significant implications for the efficient development of psychiatric care by healthcare providers and policymakers. For example, health care providers could understand their existing practices from our results on pattern of admission and hospital-level discharge rates. This awareness would contribute to setting a realistic goal for quality development (26).

Previous studies in other countries indicate that quality of care in psychiatric wards has been compromised due to increase in admission and bed occupancy rates. Scarcity of available resources and inefficiencies in their use are considered to be obstacles to better mental health, especially in low-and middle-income countries.

Moreover, local governments could monitor the effectiveness of their policies in supporting discharge from hospital to community, using our findings on prefecture-level discharge rates. Furthermore, national and local policymakers can use our estimates as the basis for estimating future medical needs for new psychiatric admissions (27).

To deliver quality care to the patients, ward design has to be accustomed. Hospital ward needs to become one element of comprehensive services and substitutes such as crisis services, day hospitals or intensive case management teams should be accessible where possible (28). Most importantly, staff needs to be increased, trained and reinforced in the managing of people with severe mental illness and substance use disorders. Overall, the lack of options for inpatient care, absence of community-based facilities, lack of programs to support families, and inaccessibility of effective rehabilitation services may further explain the longer length of stay.

One limitation of this study is that it was based on a retrospective review of patient charts. No control mechanism was in place in the hospital to ensure that the charts were complete, so some of them had limited information on patients. Diagnoses were also made retrospectively on the basis of the patient charts, and the patients had been seen by different mental health specialists over a one-year period. The admission

rates do not directly represent clinical need and only the use of existing services. Some of the patient charts were found to have incomplete data on educational qualification, marital status, occupational status, etc.

CONCLUSIONS

This study showed that schizophrenia was the most common psychiatric diagnosis leading to admission to the psychiatric clinic at Jimma University Medical Center and that most patients with schizophrenia were male. Bipolar disorder was the second most common diagnosis and was more common in women. Major depressive disorder with psychotic features and brief psychotic disorder were the next two most prevalent diagnoses, and both were more common in men. The mean length of stay in the hospital was 26 days. These data will help improve clinical decision making and service delivery at the psychiatric clinic and may also be helpful for other general hospitals in Ethiopia and other LMIC.

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