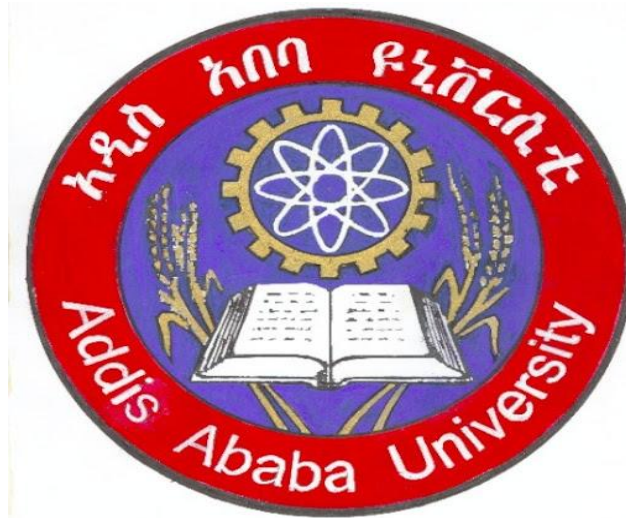


ADDIS ABABA UNIVERSITY, COLLEGE OF HEALTH SCIENCES, SCHOOL OF MEDICINE



SOCIO-DEMOGRAPHIC AND CLINICAL CHARACTERISTICS OF NEW CASES SEEN, AND INITIAL CLINICIAN DECISIONS AT AMANUEL MENTAL SPECIALIZED HOSPITAL, AA, ETHIOPIA: A RETROSPECTIVE CHART REVIEW

Final Year Resident Research Project

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RESEARCH THESIS TO BE SUBMITTED TO AAU, CHS, SOM, DEPARTMENT OF PSYCHIATRY, FOR PARTIAL FULFILMENT OF SPECIALITY CERTIFICATE IN PSYCHIATRY

Research Thesis

Title

Socio-demographic and Clinical Characteristics of New Cases Seen, and Initial Clinician Decisions at Amanuel Mental Specialized Hospital, AA, Ethiopia: A Retrospective Chart Review

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Abstract

Background: Amanuel Mental Specialized Hospital which is situated in the capital, Addis Ababa is the only mental health hospital in Ethiopia. The hospital has a huge burden in offering both inpatient and outpatient services for patients who come from all regions of the country. Having access to this hospital for treatment and continuing follow-up is also a challenge for many patients. Studying the characteristics of patients seen at this hospital will be a good input for the decentralization of mental health services which the country is implementing.

Objective: To assess socio-demographic and clinical characteristics of new patients seen, and decisions made by clinicians who did the first evaluation, at AMSH.

Methodology: A retrospective chart review of 384 new cases who had been seen at AMSH from September 11, 2019, to March 9, 2020, was done in August 2020. Sampling was done by systematic random sampling method. Data analysis was done by using SPSS V25.

Result: The majority of patients were from Oromia 196(51%) followed by Addis Ababa 105(27.3%). The majority of cases 298(77.6%) were labeled as regular after triage. The majority of patients 327 (85.2%) came without a referral. Schizophrenia spectrum and other psychotic disorders 180(46.9%) were the most common diagnosis followed by depressive disorders 63(16.4%) and epilepsy 29(7.6%). The majority of cases 338(88%) were managed as outpatient and prescribers with BSc or MSc in psychiatry 91(48.4%) were the most common clinicians identified to do the first evaluation for the new cases followed by GPs 48(25.5%). Of total patients, 359(93.5%) did not require medications other than risperidone, chlorpromazine, haloperidol, diazepam, clonazepam, amitriptyline, fluoxetine, sodium valproate, phenobarbital, and benzhexol(Artane).

Conclusion: The majority of new patients come to AMSH for a service that can be provided at primary health care units. Increasing public awareness about mental health services and strengthening mental health services provided in primary health care units and other hospitals by stakeholders is recommended to decrease patient overload at AMSH and help the patients in getting mental health services in their vicinity.

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Acronyms

| | | |
|--------------|-------|---|
| AAU | ----- | Addis Ababa University |
| AMSH | ----- | Amanuel Mental Specialized Hospital |
| CHS | ----- | College of Health Sciences |
| EOPD | ----- | Emergency Out Patient Department |
| HSTP | ----- | Health Sector Transformation Plan |
| mhGAP | ----- | Mental Health Gap Action Program |
| MNS | ----- | Mental, Neurological, Substance Use |
| PHC | ----- | Primary Health Care |
| PO | ----- | Per os (taken orally) |
| ROPD | ----- | Regular Out Patient Department |
| SPSS | ----- | Statistical package for the social sciences |
| SOM | ----- | School of Medicine |
| WHO | ----- | World Health Organization |

1. Introduction

Amanuel Mental specialized Hospital is one of the public hospitals in Addis Ababa. It is the only mental health hospital in Ethiopia (1). Most of the inpatient mental health services for Ethiopia is provided by AMSH. About 200 patients with severe mental illness are admitted to the wards each month. The hospital also serves about 500 outpatients per day and about 10,000 per month. The hospital report shows a bed occupancy rate of 91.2%, and an average length of stay of 33.4 days, and an average waiting time of 79.8 minutes to get outpatient treatment service (1).

At AMSH there is a long list of severely ill patients waiting for days to be admitted. Many beds are occupied by chronic patients due to a lack of rehabilitation centers. Patients come from all regions of the country which also contribute to long waiting list. When bed is not available, patients will be prescribed injectable antipsychotics and send back home (2).

There is no study found during the literature search which describes characteristics of new cases seen at Amanuel mental specialized hospital. But, there are some studies that were done to assess some aspects of patients seen in different units of the hospital. There is also one study which was done many years ago and descriptively analyses inpatient cases.

This study tries to describe all types of new cases that are seen in the hospital from September 11, 2019, to March 9, 2020. It tries to identify the reasons for referral, diagnosis, socio-demographic characteristics, and other factors.

Statement of the problem: Amanuel Mental Specialized hospital is highly overwhelmed by patient flow and this factor might interfere with appropriate patient care since there will not be enough time to evaluate patients appropriately and also might predispose clinicians to burn out(3,4). Having access to this hospital and continuing follow up is also a challenge for many patients.

Significance of the study: Studying the reasons patients overcrowd Amanuel mental specialized hospital and also understanding the characteristics of those patients may help in developing a strategy to decrease referrals to the hospital and contribute for the country's plan of integration of

mental health services to primary health care. It will also be an input for the improvement of mental health services in the country.

1.1 Literature Review

A case study done in Ethiopia showed that patients will have difficulty in getting access to mental health services (5). A story of a woman who was a farmer and got psychotic after she became pregnant and taken to a traditional healer and traveled a long distance to Addis Ababa to get admitted and treated at AMSH and discharged improved and disappear from follow up is not an uncommon story (5).

There is a lower admission rate in Ethiopia which contrasts with the enormous need in the wider community as demonstrated by recent community-based studies in Ethiopia (5,6,7,8,9). Since there are no alternative treatment opportunities and there is a high burden of mental illness, Ethiopia's low rate of admission indicates patient neglect (6).

Most admitted patients were from Addis Ababa in a study done on AMSH admissions (6). This factor shows the importance of proximity to a health facility to get health services during emergencies and also chronic illnesses (6). The study also shows that most admitted patients were men which might be a reflection of the prevalence of schizophrenia in a wider community (6).

WHO has been active in mental health in Ethiopia for many years (10). Currently, the main focus is to promote the integration of mental health into primary health care. The WHO global mental Health Gap Action Program (mhGAP) is reflected in Ethiopia in the project ‘‘scaling up services for mental, neurological, and substance use (MNS) disorders within WHO Mental Health Gap Action Program (mhGAP)’’. mhGAP is fully aligned with national mental health strategy which contains a relevant component of decentralization of mental health service (10).

According to WHO AIMS report on mental health in Ethiopia, there is only one mental health hospital with 0.35 beds per 100,000 populations (11). The patients admitted to the mental health hospital were mostly given a diagnosis of schizophrenia (60%) followed by mood disorders (25%). None of the beds in the hospital are separately reserved for children or adolescents and predominantly used by males (11). There are no separate forensic inpatient units in the country.

Patients who require forensic mental health assessment receive such assessment in the mental health hospital (11).

The pattern of distribution of diagnosis is different in outpatients and mental health hospital (11). The most prevalent diagnosis in outpatient facilities is other conditions followed by schizophrenia while in Mental health hospital schizophrenia followed by other conditions, substance use disorder makes 0.1% of mental health hospital diagnosis while none in outpatient facilities. Personality disorders are not diagnosed in both facilities (11).

In Ethiopia, mental illnesses are the leading non-communicable disorders in terms of burden. In predominantly rural areas of Ethiopia mental illness comprised 11% of the total burden of disease, with schizophrenia and depression being among the top ten most burdensome conditions (12). Moreover, problems related to alcohol and substance use, epilepsy, schizophrenia, and bipolar disorder affect 0.5-1.5% of the population (12).

It is estimated that about 25 million Ethiopian suffer from some form of mental disorders, while less than 10% receive any form of treatment, and less than 1 % receive specialist care (13, 14). According to a study published by Getinet Ayano in 2016, psychiatrists are a scarce resource in Ethiopia; in a population, over 101 million there are only 63 psychiatrists (13). Most of the psychiatrists are concentrated in large cities and consequently, treatment gap exists as a high proportion of Ethiopians live in rural areas (more than 80% of the population of the country live in rural areas) and therefore have no access to mental health services (13). Community model of mental health care in Ethiopia impediments to mental health care services include the uneven distribution of mental health resources, problems of accessing services in remote areas, affordability, and social acceptability in relation to ignorance and belief systems (13).

The resultant effect of all of these impediments is the rising number of people with mental disorders living on the streets which are a major social problem requiring an urgent solution (13). Integrating mental health services into primary care is the most viable way of ensuring that people get mental health services they need that are close to their homes. People can access mental health services close to their homes, thus keeping families together and maintaining their daily activities, and also avoid indirect costs associated with seeking specialist care in distant

locations (13). In addition, intervening at the primary care level helps to minimize stigma and discrimination (13, 15).

Ethiopia's mental health policy promotes integration of mental health services into primary health care(16). It also promotes availability of commonly prescribed psychotropic medicines and mental health professionals at primary health care units(16,17,18,19).

1.2 Research Question

What are the socio-demographic and clinical characteristics of new patients seen, and decisions made by the clinicians who did the first evaluation at Amanuel Mental Specialized Hospital?

1.3 Objectives

General objective

To assess socio-demographic and clinical characteristics of new cases seen, and decisions made by the clinicians who did the first evaluation at Amanuel Mental Specialized Hospital

Specific Objectives

To identify socio-demographic profile of new cases seen at Amanuel Mental Specialized Hospital

To understand the geographic distribution and the reason for the referral of the new cases

To verify common presenting complaints of new patients seen at AMSH

To see the diagnostic distribution of cases seen at the hospital

To assess common psychotropic medications prescribed for new patients seen at the hospital

To know the decision of clinicians who did an evaluation of the patients during the first visit

2. Methodology

2.1 Study Design

A retrospective chart review study design with a quantitative method was used to undertake the study.

2.2 Study Setting

The study was conducted at Amanuel mental specialized hospital which is located in Addis Ababa, Ethiopia. It is the only Mental Health Hospital in the country. I has 337 health professionals and 456 supporting staffs. There are 12 psychiatrists, 1 neurologist, 24, general practitioners, 35 Msc psychiatry professionals, and other health professionals working in the hospital in different case teams. It has around 270 beds for inpatient and also serves around 500 outpatients per day. Services are given in different case teams each led by a psychiatrist. There are 15 OPDs in this hospital.

2.3 Source Population

The source population of the study was patients seen at AMSH.

2.4 Study Population

The study population was new patients seen at AMSH from September 11, 2019, to March 9, 2020.

Inclusion Criteria

Patients seen at AMSH for the first time from September 11, 2019, to March 9, 2020

- Patients who had visited Amanuel hospital for the first time during the specified time are considered as new patients whether they have a previous psychiatric diagnosis or not at other health facilities.

Exclusion Criteria

Patients who had been seen at AMSH for the first time before September 11, 2019, or after March 9, 2020

- Patients who have been seen at the hospital before or after the specified time for the first time.

2.5 Sample Size and Sampling

The sample size was determined by using a formula for a single population proportion. The proportion of interest of 50% was used to get the maximum sample size. The sample size (N) of 384 was determined by using Z score (Z) of 1.96, 0.05 margin of error (w), and 50% as a proportion of interest (P) with the following formula:

$$N = Z^2 P (1 - P) \div w^2$$

N, sample size

Z, confidence interval

P, the proportion of the interest variable

W, the margin of error

$$N = 1.96^2 \times 0.5(1-0.5)/0.05^2 = 384.16$$

Sampling was done through systematic random sampling by lottery method after all Medical record numbers of new cases seen from September 11, 2019, to March 9, 2020, were identified from the hospital's HMIS registries. 4909 new cases were identified during the specified time. 4909 was divided by 384 to get the choosing interval which was found to be 12.8. Medical record numbers of patients on HMIS during the specified time was selected every 12th and 13th interval alternatively. A total of 384 MRN were selected and for missed charts, a subsequent medical record number was used as a replacement.

2.6 Data Collection

Data were extracted from selected charts based on the data extraction form which was prepared for this purpose. Data were collected by the investigator, but some data clerks and supporting staff of the hospital were recruited for help including locating charts. Data were collected in the month of August of 2019 with the help of one prescriber with a BSc degree in psychiatry. Data

which were collected by the prescriber were frequently checked by the primary investigator for completeness and there was no gap found.

Data collection tool

The data extraction sheet which contains socio-demographic and clinical data were prepared for data collection. The following information was extracted from patient charts:

- Chart number, age, sex, address, marital status, educational level, religion.
- Type of case, the reason for referral, presenting complaint, diagnosis, and psychotropic medication prescribed.
- Admission indicated or not, if indicated was a bed available, type of clinician who did the first evaluation, and other management.

2.7 Data Analysis

Data from the data extraction sheet were coded and entered into a statistical package for social sciences version 25. Data analysis was done using the same software.

2.8 Ethical Consideration

Ethical approval was obtained from the Department of Psychiatry, School of Medicine, College of Health Sciences, Addis Ababa University, and AMSH ethics committee. Name of patients or clinicians who saw the patients were not taken.

3. Result

3.1. Socio-demographic Description

A total of 384 patient charts were reviewed in August 2020. The age of patients ranged from 13 to 94 years with a mean age of 35 years and a standard deviation of 16.59. Of these, 224(58.3%) were Males and the mean age of females was higher than that of males with a mean difference of 3.98 years ($t = 2.33$, $P < 0.05$).

Patients came from almost all regions of the country. Most of the patients 196(51%) came from Oromia followed by Addis Ababa 105(27.3 %), SNNP 47(12.2%), Amhara 25 (6.5%) regions and the remaining came from other regions, and the address of 2 patients was not recorded. Out of 205 patients whose religion was recorded, 123(60%) were Christians while 82(40%) of them were Muslims. Regarding occupation, data was found for 162 patients where 66(40.7%) of them were employed and 96(59.3%) were unemployed.

Information on marital status was recorded for 313(81.5%) patients. Of those that had recorded, 149(47.6%) were married while 133(42.5%), 19(6.1%), 12(3.8%) were single, divorced, and widowed, respectively. Regarding educational status, the record was found only for 104 patients. Of these, 52(40.3%) had attained elementary, 36(27.9%) secondary, and 16(12.4%) college level or above (Table 1 below).

Table 1: Socio-demographic characteristics of study participants

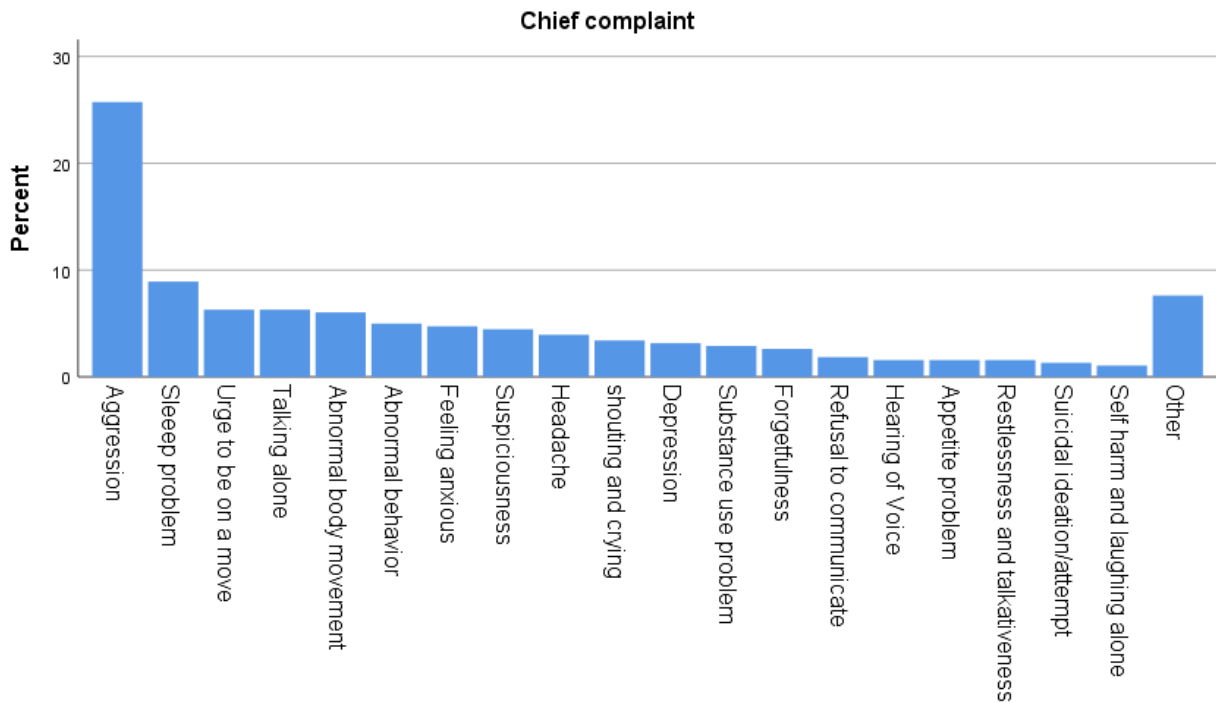
| Characteristics | | Number | Percent |
|--------------------|--|--------|---------|
| Sex | Male | 224 | 58.3% |
| | Female | 160 | 41.7% |
| Occupation | Unemployed | 96 | 25% |
| | Employed | 66 | 17.2% |
| | Missing | 222 | 57.8% |
| Religion | Christian | 123 | 32% |
| | Muslim | 82 | 21.4% |
| | Missing | 179 | 46.6% |
| Marital Status | Married | 149 | 38.8% |
| | Single | 133 | 34.6% |
| | Divorced | 19 | 4.9% |
| | Widowed | 12 | 3.1% |
| | Missing | 71 | 18.5% |
| Educational status | Elementary school | 52 | 13.5% |
| | High School | 36 | 9.4% |
| | Illiterate | 25 | 6.5% |
| | College and above | 16 | 4.2% |
| | Missing | 255 | 66.4% |
| Address | Oromia | 196 | 51.1% |
| | Addis Ababa | 105 | 27.3% |
| | Southern Nations, Nationalities and Peoples | 47 | 12.2% |
| | Amhara | 25 | 6.5% |
| | Others | 9 | 2.4% |
| | Missing | 2 | 0.5% |

*Others: Harari, Somali, Gambella, Tigray, Dire Dawa

3.2. Clinical Description

After a triage 298(77.6%) of cases were labeled as regular while 86(22.4%) of them were labeled as emergency cases. Most of the emergency cases came from Oromia 50(58.1%) followed by Addis Ababa 22(25.6%). Diverse chief complaints were recorded from the patients and caregivers. All-in-all 38 different chief complaints were identified from the charts and no chief complaint was recorded for 3 patients. For 98(25.7%) patients, the main complaint was aggression. Sleep problem, urge to be on the move, talking alone, abnormal body movement,

abnormal behavior, and depression were chief complaints for 34(8.4%),24(6.3%), 24(6.3%), 23(6%), 19(4.9%), and 12(3.1%) of the patients, respectively (Figure 1). Of the total who presented with aggression, 70(71.4%) were males.



Other: loss of consciousness, for certificate, I don't know, burning sensation, cough, belching, self isolation, flank pain, to have follow up, dizziness, difficulty talking, for visit, for better investigation, fatigue, urge to be on a move, to have follow up, accident, collecting garbage, easily irritable

Figure 1: Chief Complaints of Study Participants

Most of the patients 327(85.2%) came to the hospital without a referral. Of those who came with referral letters in 52(91.2%) of the cases, the referral letter stated “for better management”, 4 (7.0%) due to patient preference, and only one patient was referred for ECT.

The most common main working diagnosis was schizophrenia spectrum and other psychotic disorders 180(46.9%), followed by depressive disorders 63(16.4%), epilepsy 29(7.6%), neurocognitive disorders 24(6.3%), and bipolar and related disorders 18(4.8%). For 45(11.7%) of patients, medical diagnosis was given as their main diagnosis including epilepsy. Schizophrenia spectrum and other psychotic disorders were most commonly diagnosed in the age group 21-30 years followed by 11-20 and 31 -40 years. Neurocognitive disorders were more frequently diagnosed in the age group of 61-70 years followed by 51-60 and 71-80. The mean age for

Schizophrenia and other psychotic disorders was 33 years, for neurocognitive disorders 70 years while it was 28 years for bipolar and related disorders. Epilepsy was more frequently diagnosed in the age group of 11-20 and the mean age for cases with epilepsy was 26. For neurodevelopmental disorders, the mean age was 21.

Of the total cases with schizophrenia 117(65%) were males. While that of depressive disorders and epilepsy 35(55.6%) and 16(55.2%), respectively, were females. For Bipolar and related disorders, 12(66.7) were males.

Information on substance use was found for 262(68.2%) patients. Of these, 32(12.2%) patients had substance-related and addiction disorders as a comorbidity with other disorders. Of those patients with comorbid substance-related and addiction disorders, 12(37.5%) patients had chat and tobacco use disorder while 5(15.6%) patients have tobacco use disorder, and 5(15.6%) patients had alcohol and tobacco use disorder. Out of 384 cases, only 7 cases had comorbid psychiatric illnesses other than substance-related and addiction disorders. These comorbid illnesses are 3 depressive disorders, 3 anxiety disorders, and 1 schizophrenia spectrum and other psychotic disorders. The presence or absence of comorbid medical illness was recorded in 292 (76%) patients. Of these, 35 (12%) patients reported having medical comorbidity (Table 2).

Table 2: Clinical diagnosis given to study participants

| Diagnosis | | N | % |
|--|--|-----|-------|
| Main working diagnosis | Schizophrenia spectrum and other psychotic disorders | 180 | 46.9% |
| | Depressive disorders | 63 | 16.4% |
| | Epilepsy | 29 | 7.6% |
| | Neurocognitive disorders | 24 | 6.2% |
| | Substance related and addictive disorders | 22 | 5.7% |
| | Tablet and Related Disorders | 18 | 4.7% |
| | Anxiety disorders | 10 | 2.6% |
| | Others* | 38 | 9.9% |
| Comorbid substance related and addiction disorders | No | 230 | 8.3% |
| | Yes | 32 | 59.9% |
| | Missing | 122 | 31.8% |
| If Yes, the Comorbid substance related and addiction disorders | Chat and tobacco use disorder | 12 | 37.5% |
| | Alcohol and tobacco use disorder | 5 | 15.6% |
| | Tobacco use disorder | 5 | 15.6% |
| | Alcohol use disorder | 4 | 12.5% |
| | Others** | 6 | 18.8% |
| Comorbid medical illness | No | 257 | 66.9% |
| | Yes | 35 | 9.1% |
| | Missing | 92 | 24% |
| If Yes, the Comorbid medical illness | HIV/AIDS | 11 | 31.4% |
| | Hypertension | 6 | 17.1% |
| | Gastritis/Dyspepsia | 3 | 8.6% |
| | Epilepsy | 3 | 8.6% |
| | Others*** | 12 | 34.3% |

Others *: Other medical illnesses, Migraine headache, Tabletst partum psychosis, AFI, Neurodevelopmental disorders, No major psychiatric illness, Somatic Symptom and related disorders, Trauma and stress related disorders, Dyspepsia, Bereavement, Tension headache, Catatonia associated with?, Other mental disorders, Personality disorders, Sleep wake disorders

** : Alcohol and chat use disorder; Cannabis, chat and tobacco use disorder; Chat use disorder

*** : polycythemia, migraine headache, goiter, HTN and DM, HTN and HIV, Hepatitis, Asthma, DM

3.3. Decisions Made

Based on a patient's 'medical record on the first visit, admission was indicated only for 46(12%) of patients. Out of these who deserved admission on the first visit, only 14(30.9%) got admitted on the same day. For most emergency cases 56(65.1%), admission was not indicated. Only 16(5.4%) of regular cases had required admission.

Of the total, 282 (73.4%) patients were prescribed antipsychotics. Risperidone tablet was the most commonly prescribed antipsychotic medicine followed by chlorpromazine tablets, and haloperidol tablets. Haloperidol injection combined with different p o antipsychotics was given to 44 (11.5%) patients on the first visit. Of those prescribed antipsychotics 259(91.8%) were prescribed risperidone, chlorpromazine, or haloperidol as monotherapy or in combination. Modecate alone or in combination with other antipsychotic medications was given to 5 patients on their first visit. For one patient, risperidone tablets, chlorpromazine tablets, and modecate injection were prescribed on the first visit. Risperidone tablets with olanzapine tablets, Thioridazine tablets with olanzapine tablets, and chlorpromazine tablets with olanzapine tablets were prescribed for one patient each. All of the patients for whom Modecate or combined antipsychotic tablets prescribed were treatment naïve and the rationale for the modecate or combined antipsychotic tablets were not recorded.

Of the total, 134(34.9%) patients were prescribed benzodiazepines. Diazepam tablets were the most commonly prescribed benzodiazepines 43(32%) followed by diazepam injection 26(19.4%) and clonazepam tablets 20(15%). Of total patients prescribed benzodiazepines 81(60.4%) were prescribed only diazepam tablets and or injections while 109(81.3%) patients were prescribed clonazepam and or diazepam (tablets or injection).

Psychotropic medications other than antipsychotics and benzodiazepines were prescribed for 173(45%) patients on the first visit. Amitriptyline was the most frequently prescribed other psychotropic medication which was prescribed for 71(41%) patients, and followed by fluoxetine for 33(19.1%) patients, Phenobarbital for 24(12.7%) patients, and sodium valproate for 22(11.6%). Of total patients prescribed other psychotropic medicines 144(84.4%) of patients were prescribed only Amitriptyline, fluoxetine, Phenobarbital, or Sodium valproate (Table 3). 48 patients were given other non-psychotropic medications. Of the total 5(1.3%) patients were

linked to psychologists for psychotherapy and another 5(1.3%) were transferred to substance unit while one patient was referred to another hospital for medical evaluation with the assessment of dyspepsia.

Of total patients, 359(93.5%) did not require medications other than risperidone, chlorpromazine, haloperidol, diazepam, clonazepam, Amitriptyline, fluoxetine, sodium valproate, Phenobarbital, and benzhexol(Artane).

Table 3: Admission and prescriptions for the patients

| Decision taken | | Number | Percent |
|------------------------------------|--|--------|---------|
| Admission indicated | No | 338 | 88.0% |
| | Yes | 46 | 12.0% |
| If yes, was bed available | No | 32 | 69.6% |
| | Yes | 14 | 30.4% |
| Antipsychotic prescribed | Yes | 282 | 73.4% |
| | No | 102 | 26.6% |
| If yes, antipsychotic prescribed | Risperidone tablets | 134 | 47.5% |
| | Chlorpromazine tablets | 44 | 15.6% |
| | Haloperidol tablets | 37 | 13.1% |
| | Risperidone tablets and Haloperidol injection | 28 | 9.9% |
| | Olanzapine tablets | 13 | 4.6% |
| | Haloperidol tablets and Haloperidol injection | 8 | 4.6% |
| | Chlorpromazine tablets and Haloperidol injection | 6 | 2.8% |
| | Others* | 12 | 4.3% |
| | | | |
| Benzodiazepines prescribed | No | 250 | 65.1% |
| | Yes | 134 | 34.9% |
| If yes, benzodiazepines prescribed | Diazepam tablets | 43 | 32% |
| | Diazepam injection | 26 | 19.4% |
| | Clonazepam tablets | 20 | 15% |
| | Lorazepam tablets | 14 | 10.4% |
| | Diazepam tablets and Diazepam injection | 12 | 9% |
| | Others** | 19 | 14.2% |
| Other psychotropic medication | No | 211 | 54.9% |

| | | | |
|--|--------------------------|-----|-------|
| prescribed | Yes | 173 | 45.1% |
| If yes, other psychotropic medication prescribed | Amitriptyline tablets | 71 | 41% |
| | Fluoxetine | 33 | 19.1% |
| | Phenobarbital tablets | 22 | 12.7% |
| | Sodium valproate tablets | 20 | 11.6% |
| | Sertraline tablets | 16 | 9.2% |
| | Others*** | 11 | 6.4% |

Others*Haloperidol injection;Modecate injection;Modecate, risperidone and chlorpromazine;Modecate injection and haloperidol injection;Stelazine tablets;Thioridazine and Olanzapine ; Olanzapine and haloperidol injection; Risperidone , olanzapine and haloperidol injection; Risperidone and Modecate injection; Chlorpromazine and Olanzapine

**clonazepam tablets and diazepam injection; bromazepam tablets; lorazepam tablets and diazepam injection; bromazepam tablets and diazepam injection

***Carbamazepine tablets; carbamazepine tablets and Phenobarbital tablets; imipramine; fluoxetine and sodium valproate

Names of the patients’ evaluators on the first visit were not recorded in most 196(51.0%) of the cases. Of those who put their names on the patients’ charts, 91(48.4%) were prescribers with Bsc or Msc in Psychiatry, 48(25.5%) were GPs, 30(16%) were psychiatrists, 16(8.5%) were residents and 3(1.6%) were others (Figure 2).

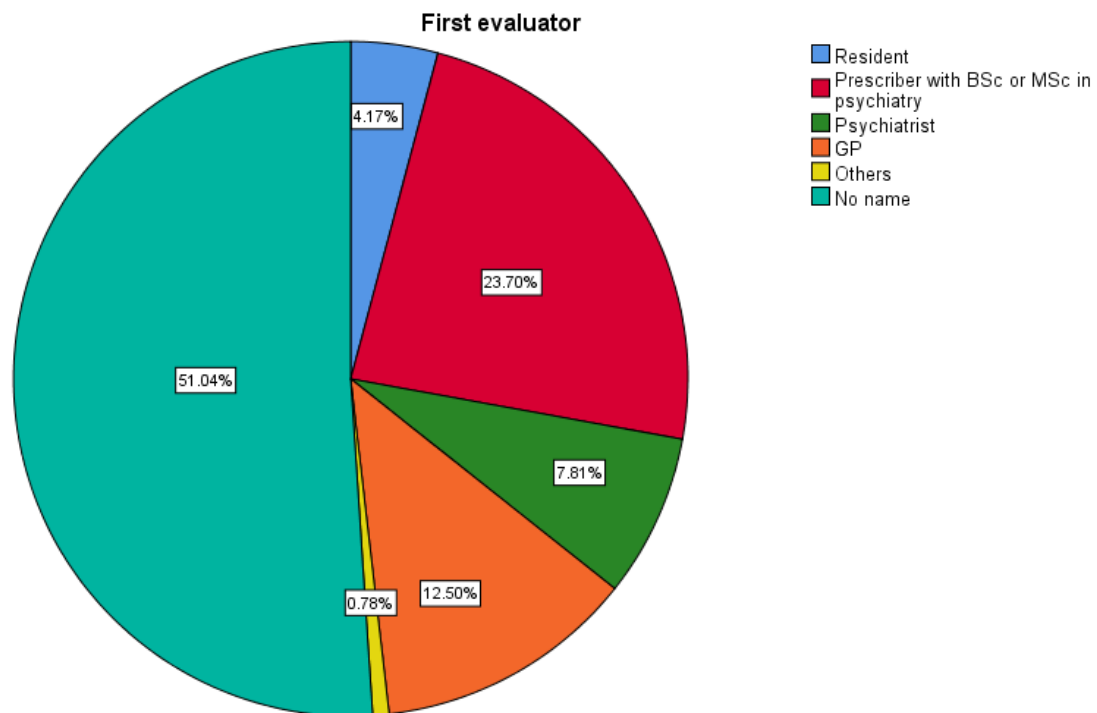


Figure 2: Clinicians who did clinical evaluation on the first visit of study participants

4. Discussion

The majority of patients came from the Oromia region similar to a recently done unpublished study at AMSH (20,21). This finding can be explained by geographic proximity to Addis Ababa which is geographically located within the Oromia region and also because Oromia is the most populous of all regions in Ethiopia.

The majority of patients came without referral and they were from out of Addis Ababa. This might be due to a lack of awareness and trust of locally available mental health service since the government has integrated mental health service into almost all primary health care units in the regions (16).

The most common main working diagnosis is schizophrenia spectrum and other psychotic disorders 180(46.9%) followed by depressive disorders 63(16.4%) similar to unpublished studies done at AMSH (20, 21). A descriptive analysis done by Fekadu et al and also WHO-AIMS report showed that schizophrenia is the most common diagnosis of AMSH inpatients (6, 11).

Schizophrenia and other psychotic disorders are most commonly diagnosed in the age range of 21-30 which is the typical age group for onset of schizophrenia (22). Depressive disorders are more frequently diagnosed in the age group of 21-30 and the mean age for depressive disorders is 34 unlike the study done by Tessera Bitew on prevalence and risk factors of depression in Ethiopia (23).

For Bipolar and related disorders the mean age is 28 in this study which is far higher than the mean age of onset of first episode of Bipolar disorders (8, 22). This might be due to failure in diagnosing first episode of Bipolar disorders or patients might not seek treatment at all or just visit their nearby health facility during early phase of the disorder and come to AMSH when they develop severe episodes.

The majority of cases have severe mental illness as their main working diagnosis. There is a huge disparity between sex distributions of severe mental illness in this study. Both schizophrenia spectrum and other psychotic disorders, and Bipolar and related disorders are almost two-fold more common in males. This finding is similar to a study done in community samples in Ethiopia (7, 8).

The most commonly prescribed drug class in this study is antipsychotics followed by benzodiazepines and other psychotropic medications similar to a study done on the prescription pattern of psychotropic drugs for treatment naïve patients at AMSH by Amare (20). Risperidone tablet is the most commonly prescribed antipsychotic followed by chlorpromazine tablets and haloperidol tablets. Risperidone, chlorpromazine, and haloperidol are among the drugs on the essential drug list (17).

Benzodiazepines were prescribed for 134(34.9%) patients in this study. Diazepam tablets or injection was used in the majority of cases who were prescribed benzodiazepines followed by clonazepam. Diazepam is on the essential drug list, but not clonazepam (17). The most commonly prescribed other psychotropic medication was antidepressant. Antidepressants were prescribed for 124(32.3%) patients. The majority of antidepressant prescribed was amitriptyline followed by fluoxetine which is also on essential drugs list (17). Other commonly prescribed psychotropic drugs sodium valproate and Phenobarbital are also on the essential drugs list (17).

There was off label prescription of antipsychotics for some patients. For four patients two types of antipsychotic tablets were prescribed during the first visit for patients who have no history of antipsychotic exposure. Long-acting injectable was also prescribed for 5 patients on the first visit who were not treated before with antipsychotics. These findings are not recommended (24), but are similar to a study done by Amare (20).

Although the name of clinicians who evaluate the patients on the first visit is not identified in most cases, based on the data of those clinicians who identify themselves on the patients' charts most of the cases are seen by prescribers with BSc or MSc in psychiatry or general practitioners. Ministry of health assigned general practitioners and prescribers with BSc or MSc in psychiatry in almost all primary health care units (18, 19).

The majority of patients were managed as outpatients. Admission was indicated for only 16(5.4%) of regular cases and 30(34.9%) of emergency cases. Most of the cases were managed with fewer types of psychotropic medications. Most of the commonly prescribed psychotropic medications are already on the national essential medication list and provided to the primary health care units (17, 18, 19). So, the majority of the cases could have been managed at the Primary health care unit level.

For most of the cases, complete information was not found. This might be due to time shortage in association with high case overload at OPDs and also clinicians might think that people do not appreciate complete information for patient care and reporting.

More than 4900 new cases were seen in six months' time where the majority were seen at the regular OPDs during the study period. More than 500 cases per day are seen at AMSH including new cases (1). This predisposes health workers to a high workload which is a known risk factor for work-related burnout (3). A study done by Mengesha, in 2014 reported a positive relationship between the number of patients seen at OPDs and burnout (4). The study also reported a significant level of burnouts among AMSH staff. Being treated in a crowded outpatient department will also increase the risk of acquiring communicable illnesses such as COVID 19 to the patients.

5. Limitation of the Study

Since most of the patients came without referral paper information regarding their preference of AMSH was not available on the patients' charts. There was also a significant amount of missing information for many patients. So, collection of primary data from patients or prospective study design would have been better to fill this gap. Lack of published literature on a similar topic also makes a comparison of some of these study results difficult.

6. Conclusion and Recommendations

The majority of patients come to AMSH from out of Addis Ababa and without a referral. Most of the cases are regular cases and admission was indicated only for 12% of patients. Fewer types of psychotropic medications are used in the majority of cases almost all of which are already on the national essential drugs list. Prescribers with BSc or MSc in Psychiatry and General practitioners who are available in most primary health care units were the two most commonly identified clinicians who were found to do an evaluation for the patients at this tertiary level setting. So, the majority of patients come for a service that can be provided at primary health care units.

To decrease patient overload at AMSH and also benefit patients in getting mental health services in their vicinity and reduce the cost of transportation and related expenditure

- ✓ Ministry of health should consider Increasing mental health service promotion and avail commonly prescribed medications at primary health care units if possible or at least at a general hospital level.
- ✓ University hospitals in different regions of the country also need to incorporate mental health service and increase public awareness regarding mental health service to their respective community to utilize the service
- ✓ Oromia health bureau should also increase public awareness on mental health services and strengthen the primary health care units and the general hospitals to provide adequate mental health service.
- ✓ AMSH should also try to send the new patients to nearby health facilities with mental health service at least after acute phase treatment so that patients or caregivers will know locally available health facilities for treatment of mental illness and they might recommend them for others in need.
- ✓ Ongoing refresher training might be needed for clinicians who work at AMSH to use treatment guidelines appropriately.

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Annex

Data Extraction Form

Identification of the patient

Card Number_____ Age____ sex ____ Occupation_____

Religion _____ Marital Status____ Educational status_____

Address (Region/zone/ wereda/town)_____ Date of examination_____

Clinical Data

1. Type of case based on where it was assigned after triage
 - A. Emergency
 - B. Regular
2. What is the reason of referral of the patient
 - A. For better management(specify)_____
 - B. For ECT
 - C. For inpatient management
 - D. Other(specify)_____
3. What is the chief complaint of the patient
 - A. Aggression
 - B. Sleep problem
 - C. Appetite problem
 - D. Other_____
4. Who did do the first evaluation for the patient
 - A. Resident
 - B. Prescriber
 - C. Psychiatrist
 - D. Other(specify)_____
5. What was the main working DSM 5 diagnosis cluster of the patient at AMSH
 - A. Bipolar disorders(specify)_____

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- B. Schizophrenia and other psychotic illnesses(specify)_____
 - C. Depressive disorders(specify)_____
 - D. Anxiety disorders(specify)_____
 - E. Other(specify)_____
6. Any comorbid medical illness? Specify_____
7. Any comorbid substance use? Specify_____
8. Was admission indicated based on the clinicians assessment
- A. Yes
 - B. No
9. If admission was indicated did the patient get bed on evaluation day
- A. Yes
 - B. No
10. Psychotropic medication prescribed on first visit
- A. Antipsychotics(specify)_____
 - B. Benzodiazepines(specify)_____
 - C. Antidepressants(specify)_____
 - D. Other(specify)_____
 - E. None
11. Other management_____