Descriptive Analysis of Cases Seen At Psychiatric Outpatient Department Of Tikur Anbessa Specialized Hospital from Sep 11, 2019 - Mar 9, 2020

A RETROSPECTIVE CROSSECTIONAL ELECTRO MEDICAL RECORD REVIEW

PREPARED: DR TESFANESH ABEBE (THIRD YEAR RESIDENT)

ADVISORS: DR RIBKA BIRHANU (ASSISTANT PROFESSOR OF PSYCHIATRY)

DR YONAS BAHIRETIBEB (ASSOCIATE PROFESSOR OF PSYCHIATRY AND CHILD PSYCHIATRIST)

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DEPARTMENT OF PSYCHIATRY, COLLEGE OF HEALTH SCIENCES, ADDIS ABABA UNIVERSITY.

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A retrospective crossectional study in Addis Ababa, Ethiopia

ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH SCIENCES DEPARTMENT OF PSYCHIATRY

STUDENT:

Tesfanesh Abebe (MD)

E-mail: tbbilen02@gmail.com

Advisors	Signature
1. Dr. Ribka Birhanu	_____
2. Dr. Yonas Bahiretibeb	_____
Examiners	
1. Professor Mesfin Araya	----------
2. Dr. Getahun Belay	----------

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Abstract

Background

In mental health descriptive studies on the socio-demographic variables provides data regarding study participants and it is necessary for the determination of whether the individuals in a particular study are a representative sample of the target population for the generalizability purpose. It helps to Identify and address differences in care for specific population and for the development of additional patient centered services. Among the study done in Ethiopia, there is an existing inpatient visit study at Amanuel mental specialized hospital. At TASH there is a lack of organized data regarding socio-demographic characteristics, diagnosis, and frequency of psychiatric illnesses.

Objective

To identify the socio-demographic characteristics, diagnosis, and frequency of psychiatric illness at TASH outpatient department of psychiatry.

Method

Descriptive study was conducted. The study material was 981 charts of patients, which was assessed from electro-medical recording system, by using a convenient non-probability sampling method to explore the socio-demographics of the patients and their diagnosis. Data was collected by a means of data extraction sheet from electro-medical recording system at TASH. The collected data was analyzed by using SPSS version 25, in the analysis process frequency distribution of variables was calculated.

Results

The result of this research has shown that the mean age of patients to care is 30.5, 54.5% were male in gender. 18.1 % have a higher-level education, 42.7% are employed, and 43.5% single. 21.9% had a diagnosis of depressive disorder, 20.7 % had schizophrenia spectrum and other psychotic disorder and 17.2 % have neurodevelopmental disorders. 71.5% are treated with only medication and 23.3% are treated with psychotherapy.

Conclusion

The present study point to the need for further research and attention to lack of completeness of the records seen on the socio-demographic and diagnosis variables which could be detrimental to the quality of healthcare service and the need for child and adolescent clinic that is found to hold significantly high number compare to the service provide currently.

Contents

List of tables and figures:

Acronyms

AMSH	Amanuel Mental Specialized Hospital
DD	Dissociative disorder
DSM-5	Diagnostic And Statistical Manual Of Mental Disorder Fifth Edition
GOV	Government
ID	Identification
MHS	Mental Health System
MI	Medical illness
NCD	Neurocognitive disorder
Non-Gov.	Non-governmental
OPD	Out Patient Department
OCD	Obsessive compulsive disorder
SNNP	Southern nation and nationality people
SRQ	Self-reported questionnaire
SSD	Somatic symptom disorder
TASH	Tikur Anbessa Specialized Hospital
TRD	Trauma and related disorder
WHO	World Health Organization

1. Chapter One

1.1. Introduction

1.1.1 Background

Psychiatric illness is the leading cause of morbidity and disability worldwide. It is an important health problem that refers to how people feel, behave, and interact with the people around them. The spectrum of this issue ranges from a simple mood disorder to permanent disability and even death. (1)

Globally around one billion people in 2017 experienced either one or more mental or substance use disorders, which means around 1-in-7 people. Around 4 percent of the population had an anxiety disorder. Within the low-income nations given a known under-reporting and poor data coverage of mental health, this may even be considered a minimum estimate. (2)

From 887 new patients attending an outpatient clinic in Nepal in six month period, the majority of the patients fall in the age groups between 21-30 (25.7%) and 31-40 (24.1%), and Females (50.4%) are slightly more than males (49.6%). The majority of the cases were suffering from neurotic, stress-related, and somatoform disorders which accounts for (9.7%), which is followed by mood disorder (35.4%) schizophrenia, schizotypal and delusional disorders (18.3%), and mental and behavioral disorders due to psychoactive substance use (17.4%). (3)

Out of the 1,020 patients attending the OPD in India, 36.4% were suffering from schizophrenia and other psychotic disorders, 22% were suffering from neurotic, stress-related, and somatoform disorders, 21.3% from mood disorders, 2.6% from

organic mental disorders, 2.2% from mental retardation, 2.1% from substance dependence disorders. (4)

Mental disorder is the leading non-communicable disorder in terms of burden in Ethiopia. Ethiopia with an estimated population of more than 100 million has a burden of mental disorders (WHO official estimates) categorized under Disability-adjusted life years (per 100,000 population) is 2,171.27.(5)

In every five persons, one person will be affected by mental disorders at some stage of his or her life. Community-based studies conducted using the instrument Self-reported questionnaire(SRQ) reported that the prevalence of common mental disorders in Butajira, Addis Ababa, and Hadiya district was 17.4%, 11.7%, and 11.2% respectively. (6)

A study done at kombolcha found out that the prevalence of common mental disorders was found to be 32.4% (95% CI: 30.3-34.5%). (7) The prevalence of common mental illnesses in the study done at Harari regional state (eastern Ethiopia) among adults was 14.9%. (8)

Psychiatric care in addition to TASH is delivered at Amanuel Mental Specialized Hospital, Eka-Kotebe, Zewditu, Yekatit 12 hospitals in Addis Ababa, and several outpatient clinics nationwide.

A study done at emergency department of Amanuel mental specialized hospital revealed that from 385 subjects of the study, majority (65.3%) of the participants were having Schizophrenia, brief psychotic disorder, psychosis secondary to GMC (9)86(22.3%), 34(8.8%) and 12(3.1%) respectively. Other diagnosis were bipolar disorder, depression, seizure disorder and other psychiatric disorder. (9)

This study aims to understand the service provided in terms of diagnosis and socio-demographic patterns.

1.1.2 Statement of the problem

Tikur Anbessa Specialized Hospital is one of the largest and oldest hospital in the country. It provides services in all the fields of medicine including psychiatry. But it only provides this service at an outpatient level. Despite its services, the hospital doesn't have existing descriptive analysis regarding psychiatric cases; this leads the distribution of the psychiatry cases in the hospital to remain unrecognized.

1.1.3 Objective of the study

General objective:

- Identify the socio-demographic characteristics, diagnosis, and frequency of psychiatric illness at TASH outpatient department of psychiatry.

Specific objective:

- Evaluating the switching of diagnosis
- Evaluating switched diagnosis in relation to the level of residency
- Evaluating the completeness of the electronic medical records

1.1.4 Significance of the study

This study hopes to be of great importance to determine the frequency and patterns of psychiatric illness and provide meaningful socio-demographic data among patients at the psychiatry outpatient department at TASH; which are lacking in the current scenario. Most particularly it will help the health care provider to give integrated and better case team-based services at the outpatient department. We can use the study as a baseline to do other follow up studies that further increases the quality of service.

2. Chapter Two

2.1. Literature review

Mental health and substance abuse was included in the global sustainable development goals in September 2015 in the United Nations General Assembly, marking the first time world leaders' recognized mental health as a global priority. African countries began to act on this recognition by increasing their spending on mental health; currently, compared to the 6–12% health budgets European and North American dedicated African countries dedicate only an average less than 1% of their health budgets to mental health. (10)

A total of 295 patients (203 males) were included in a cross-sectional study done in a mental institution in central India. The majority of these patients (45%) were suffering from Bipolar affective disorders (45%), followed by schizophrenia (36%). The majority, 203 (68%), were from the rural area, with 94 patients being illiterate. (11)

Another study in India showed from a total of 108 interviewed patients, 59.25% were males 40.74% were female. And most of them (45.37%) were belong to the age group of 21-40 years. Unmarried or separated patients were more likely affected by mental disorder in (78.70%) and most of them are with low education status (87.96%). Depression was the most common mental illness 43 (39.81%) among all types of disorders. (12)

A study done in Bangladesh from the 1474 patients, most were in the age group 11–20 years in 388(26.3%) and 21–30 years in 437 (29.6%). Male: female ratio was 1:1. Schizophrenia 360(24.4%) was the most common psychiatric

disease found which was followed by major depressive disorder (187, 12.7%). Bipolar mania was found in 175 (11.9%) cases, and bipolar depression was found in 19 (1.3%) cases. (13)

Sub-Saharan Africa countries face the greatest challenge for the provision of adequate, fair, and equitable care in this 21st century. (10) Among the estimated 25 million Ethiopians who suffer form of mental disorder, it is less than 10 percent who receive any form of treatment, and less than 1 percent receive specialist care. (14)

A study done in Gondar to assess patient satisfaction with psychiatric outpatient which included 250 study subjects, the age range 18-30 years were 143 (45.2%) of the participants. And 146 (58.4%) of the participants were married or ever married and live in urban area 143 (57.2%). Clinical characteristics were schizophrenia, major depression, bipolar disorder and anxiety disorders with 130 (52%), 77 (30.8%), 28 (11.2%), and 15 (6%) respectively.

A study done on 600 subjects at St Paulo's Hospital in Ethiopia found out that schizophrenia, depression and bipolar disorders in 186(31.6%), 137(23.3%), 125(21.2%) respectively. (15)

Three hundred and eighty five cases were included in the study done in Amanuel mental specialized hospital which found 221(57.4%) were males which predominates the female 164(42.6%). The age range 21-40 dominates 263(68.4%), most of the study subjects were single 54.3%, and married 32.3%. Most of the study subjects were Christian 59.5%, around 181(47%) were from oromia region, 91(23.6%) from Addis Ababa, 65(16.9%) from southern nation and nationality people and 40(10.45) from Amhara region.

3. Chapter Three

3.1. Methodology

3.1.1 Study setting and study period

The study was conducted at the psychiatric outpatient of Tikur Anbessa Specialized Hospital. It is the oldest hospital in the country and started to give psychiatric service and a 3-year post-graduate training program in 1995 E.C. The service is run by Psychiatrists, clinical psychologists, and residents. There are 5 OPDs in this hospital specifically for psychiatric visits. The cases that are presented to the outpatient department include neurodevelopmental disorders, neurocognitive disorders, common mental illnesses, and others. This research was conducted from July 1, 2020, up to August 15, 2020, on individuals who have been seen at the psychiatric outpatient department of TASH in the time frame September 11, 2019, up to Mar 9, 2020.

3.1.2 Study design

The study design was a descriptive type which was used to explore the socio-demographics of patients and the characteristics of their diagnosis. A retrospective EMR review was done to explore the socio-demographic and clinical diagnoses of those patients.

3.1.3 Study population and sampling technique

All patients who visited the psychiatric outpatient clinic during the study period of September 11, 2019, up to March 9, 2020, was included.

3.1.4 Inclusion and exclusion criteria

Inclusion criteria for patients:

- Patients who were seen during the time period
- New patients and those who had followed up during the study period

Exclusion criteria

- Repeated visits were excluded
- Patients who visited the clinic before or after the study period

3.1.5 Data collection

Data collection was done by the principal investigator which was started with the collection of the patients I care number from the health management information system because every patient's electronic medical record number is registered on it before they get the service. All the socio-demographic information and diagnosis were collected through entered the EMR by using the data extraction sheet even though some files are not fully complete. It was also included the referral, medical diagnosis.

3.1.6 Data collection tool

The data extraction sheet which was designed for the specific purpose of this research was used to collect the socio-demographic profile, the DSM-5 Psychiatric diagnosis, and the treatment modalities.

3.1.7 Data analysis

Data analysis was conducted using the SPSS 25 software. After getting the information needed for the research from the electro-medical record by using the data extraction sheet, the data was coded and entered into the software. Missing information in the data was coded as -99.

3.1.8 Ethical consideration

Ethical consideration was obtained from the department of psychiatry, college of health sciences, Addis Ababa University. The identity of the patients was kept confidential.

3.1.9 Dissemination and utilization of results

The results of this study will be submitted to the department of psychiatry, SOM, AAU as part of a postgraduate thesis.

4. Chapter Four

4.1. Result

4.1.1 Description of socio-demographic features

The data collection was through the data extraction sheet. Nine hundred eighty-one patients were identified. All identified charts of patients were reviewed with missing data and this represents 100% of the patients seen at the clinic [Table 1].

Table 1 Number of charts reviewed

Visit	Frequency	Percent
New	363	37.0
Repeat	618	63.0
Total	981	100.0

The patient charts were reviewed to identify the variables. The variables were age, Gender, Address, Marital Status, Occupation, Religion, Educational status, Diagnosis, the modality of treatment used.

The overall age of the sample ranged from 2 to 84 years, with 80.3% being between 1 to 45 years.

The mean age was 30.5 years with a standard deviation of 17 years [Table 2]. The age and sex distribution of the patients who visit the psychiatric outpatient department of TASH is shown in [Table 3].

Table 2 Central tendency of the age

	N	Minimum	Maximum	Mean	Std. Deviation
Age	981	2	84	30.53	17.427

Table 3 Age and Gender distribution of studied subjects in TASH

Age	Female	Male	Total
1-15	74	130	204
16-24	80	110	190
25-35	122	124	246
36-45	66	82	148
46-55	54	42	96
56-65	35	24	59
66-100	15	23	38
Total	**446**	**535**	**981**

Gender of the patients

The study also assessed the gender proportion among those who visited the psychiatric outpatient department of TASH during the study time. There were 535(54.5%) males and 446(45.5%) females [Table 4].

Address of patients

More than half of the participants 837 (85.3%) are from Addis Ababa. Other participants came from Oromia 65(6.6%), Amhara 43(4.4%) and SNNP 19 (1.9%) [Table 4].

Marital Status of patients

The marital status of the patients was the other socio-demographic factor that was pursued in this study. The majority of them were single 378(43.5%), 136(15.7%) patients were married while 44(5.1%) of them were divorced and 11(1.3%) widowed patients [Table 4].

Educational status

It was found that 157(18.1%) patients had higher education, elementary and high school equally contribute for 112(12.9%) and 88(10.1%) had no formal education [Table 4].

Occupation

The occupational status of the patients was categorized into: employed and unemployed. From the data it was found that 371(42.7%) patients are unemployed, 161(18.5%) patients are employed [Table 4].

The religion of the patients

The religious dispersion of the patients was also studied. It was found that around 364(41.9%) of patients were Christians, followed by 67 (7.7%) Muslims and 3 (0.3%) were atheists [Table 4].

Key information was missing on religion 435(50.1%), educational level 400(46.1%), occupation 337(38.8%), and marital status 300(34.5%).

Table 4 Socio-demographic characteristics of study subjects in TASH

Socio-demographic characteristics	Number	Percent
Gender		
Male	535	54.5
Female	446	45.5
Age		
1-15	204	20.8
16-24	190	19.4
25-35	246	25.1
36-45	148	15.1
46-55	96	9.8
56-65	59	6.0
66-100	38	3.9
Address		
Addis Ababa	837	85.3
Oromia	65	6.6
Amhara	43	4.4
SNNP	19	1.9
Tigray	3	.3
Somali	3	.3
Benishangul gumuz	3	.3
Harari	3	.3
Dire dawa	1	.1
Afar	1	.1
Marital status		
Single	378	43.5
Married	136	15.7
Divorced	44	5.1
Widowed	11	1.3
Educational status		
Higher education	157	18.1
Elementary	112	12.9
High school	112	12.9
No formal education	88	10.1
Occupational status		
Unemployed	371	42.7
Employed	161	18.5
Religion		
Christian	364	41.9
Muslim	67	7.7
Atheist	3	.3

4.1.2 Diagnosis characteristics in study subjects at TASH

From nine hundred eighty-one charts reviewed 868 charts of patients had recorded diagnosis and 782(90%) had a psychiatric diagnosis as diagnosis one (major diagnosis), 50(5.8%) had a medical diagnosis as their major diagnosis, 19(2.2%) had no major psychiatric diagnosis and 17(2%) had child sexual abuse.

190 (21.9%) participants are diagnosed to have depressive disorders, 180 (20.7%) of the studied subjects are diagnosed with Schizophrenia Spectrum and Other Psychotic Disorders, 149(17.2%) Neurodevelopmental Disorders, 61(7%) Anxiety disorders, 59(6.8%) Somatic Symptom and Related Disorders and 50(5.8%) had a medical diagnosis.

Additionally 138(15.9%) of the 868 charts had a secondary diagnosis. 80(58%) of them had a medical diagnosis as their secondary diagnosis, 26(18.8%) had a neurodevelopmental disorder, and 5(3.6%) had somatic symptom and related disorders and anxiety disorder as their second diagnosis each. In this study there were 5(0.57%) diagnosis as a third diagnosis [Table 5].

Table 5 Diagnosis of studied subjects in TASH

Major Diagnosis	Frequency	Percent
Depressive Disorders	190	21.9
Schizophrenia Spectrum and Other Psychotic Disorders	180	20.7
Neurodevelopmental Disorders	149	17.2
Anxiety Disorders	61	7
Somatic Symptom and Related Disorders	59	6.8
Medical illness	50	5.8
Bipolar and Related Disorders	34	3.9
Trauma and Stressor Related Disorders	30	3.5
Neurocognitive Disorders	29	3.3

No major psychiatric diagnosis	19	2.2
Child sexual abuse	17	2
Sleep Wake Disorders	14	1.6
Substance-Related and Addictive Disorders	11	1.3
Sexual Dysfunctions	10	1.2
Malingering	4	0.5
Elimination Disorders	3	0.3
Dissociative Disorders	3	0.3
Personality Disorders	2	0.2
Obsessive-Compulsive and Related Disorders	2	0.2
Gender Dysphoria	1	0.1
Total	**868**	**100**
Second diagnosis		
Medical illness	80	58
Neurodevelopmental Disorders	26	18.8
Anxiety Disorders	5	3.6
Somatic Symptom and Related Disorders	5	3.6
Depressive Disorders	4	2.9
Schizophrenia Spectrum and Other Psychotic Disorders	3	2.2
Obsessive Compulsive and Related Disorders	3	2.2
Substance Related and Addictive Disorders	3	2.2
Personality Disorders	3	2.2
Elimination Disorders	2	1.4
Bipolar and Related Disorders	1	0.7
Trauma and Stressor Related Disorders	1	0.7
Dissociative Disorders	1	0.7
Disruptive, Impulse Control, and Conduct Disorders	1	0.7
Total	**138**	**100**
Third diagnosis		
Depressive Disorders	1	20
Medical illness	4	80
Total	**5**	**100**

4.1.3 Age and diagnosis distribution

Neurodevelopmental Disorders are most distributed in the age group 1 to 15 and Schizophrenia Spectrum Other Psychotic Disorders, depressive disorder, bipolar and related disorder were most distributed in the age group of 25 to 35. Somatic Symptom and Related Disorders and anxiety disorders in the 16 to 24 age categories [Table 6].

Table 6 Age and diagnosis distribution

Age category	Diagnosis	Frequency
1-15	Neurodevelopmental disorders	122
	Medical illness	21
	Child sexual abuse	17
	Somatic Symptom and Related Disorders	10
	No major psychiatric diagnosis	6
	Others[1]	19
16-24	Depressive disorders	36
	Schizophrenia Spectrum and Other Psychotic Disorders	33
	Neurodevelopmental Disorders	20
	Anxiety Disorders	18
	Somatic Symptom and Related Disorders	17
	Medical illness	14
	Others[2]	24
25-35	Depressive disorders	62
	Schizophrenia Spectrum and Other Psychotic Disorders	61
	Bipolar and Related Disorders	17
	Anxiety Disorders	15
	Somatic Symptom and Related Disorders	15
	Others[3]	42

36-45	Schizophrenia Spectrum and Other Psychotic Disorders	45
	Depressive Disorders	32
	Anxiety disorders	9
	Somatic Symptom and Related Disorders	9
	Trauma and Stressor Related Disorders	8
	Others[4]	27
46-55	Depressive Disorders	27
	Schizophrenia Spectrum and Other Psychotic Disorders	20
	Anxiety Disorders	10
	Somatic Symptom and Related Disorders	7
	Neurocognitive Disorders	7
	Others[5]	17
56-65	Depressive disorders	23
	Schizophrenia Spectrum and Other Psychotic Disorders	12
	Neurocognitive Disorders	5
	Others[6]	9
66-100	Neurocognitive Disorders	13
	Schizophrenia Spectrum and Other Psychotic Disorders	6
	Depressive Disorders	6
	Others[7]	7

Others[1] Depressive Disorders, Trauma and Stressor Related Disorders, Schizophrenia Spectrum and Other Psychotic Disorders, Elimination Disorders, Bipolar and Related Disorders, Anxiety Disorders, Sleep Wake Disorders

Others[2] No major psychiatric diagnosis, Bipolar and Related Disorders, Trauma and Stressor Related Disorders, Substance Related and Addictive disorders, Dissociative Disorders, Sleep Wake Disorders, Neurocognitive Disorders, Personality Disorders

Others[3] Trauma and Stressor Related Disorders, medical illness, Neurodevelopmental Disorders, Sleep Wake Disorders, Sexual Dysfunctions, Substance Related and Addictive disorders, malingering, Neurocognitive Disorders, Personality Disorders

Others[4] Neurodevelopmental Disorders, Bipolar and Related Disorders, Trauma and Stressor Related Disorders, Sleep Wake Disorders, Sexual Dysfunctions, Substance Related and Addictive disorders, malingering, Neurocognitive Disorders, No major psychiatric diagnosis

Others[5] Bipolar and Related Disorders, Trauma and Stressor Related Disorders, Dissociative Disorders, Sleep Wake Disorders, Sexual Dysfunctions, Substance Related and Addictive disorders, malingering, medical illness, No major psychiatric diagnosis

Others6 Anxiety Disorders, Bipolar and Related Disorders, Trauma and Stressor Related Disorders, Sleep Wake Disorders

Others7 Anxiety Disorders, Bipolar and Related Disorders, Somatic Symptom and Related Disorders, Sleep Wake Disorders

4.1.4 Gender and diagnosis distribution

In this study 111 of Schizophrenia Spectrum and Other Psychotic Disorders and 104 of Neurodevelopmental Disorders were more frequently seen in the male gender. In female gender 116 of Depressive Disorders and 69 of Schizophrenia Spectrum and Other Psychotic Disorders were more dominated. Other diagnosis have more or less similar distribution among the two gender [Table 7].

Table 7 Gender and diagnosis distribution

Diagnosis	Male	Female
Schizophrenia Spectrum and Other Psychotic Disorders	111	69
Neurodevelopmental Disorders	104	45
Depressive Disorders	74	116
Anxiety Disorders	30	31
Medical illness	28	22
Somatic Symptom and Related Disorders	21	38
Neurocognitive Disorders	18	11
Bipolar and Related Disorders	17	17
Trauma and Stressor Related Disorders	13	17
Others[1]	74	-
Others[2]	-	25
Total	**477**	**391**

Others[1] Trauma and Stressor Related Disorders, Child sexual abuse, No major psychiatric diagnosis, Substance Related and Addictive Disorders, Sexual Dysfunctions, Sleep Wake Disorders, Malingering, Obsessive Compulsive and Related Disorders, Elimination Disorders, Gender Dysphoria, Dissociative Disorders, Personality Disorders

Others[2] Sleep Wake Disorders, No major psychiatric diagnosis, Child sexual abuse, Dissociative Disorders, Personality Disorders, Elimination Disorders, Sexual Dysfunctions, Malingering, Obsessive Compulsive and Related Disorders, Gender Dysphoria, Substance Related and Addictive Disorders

4.1.5 Characteristics of switched diagnosis

From eight hundred and sixty-eight major diagnosis charts reviewed 88(10.1%) of patients' diagnosis were switched. Depressive disorders account for the largest switched diagnosis 25(28.4%) followed by Schizophrenia Spectrum and Other Psychotic Disorders 17(19.3%), Neurodevelopmental Disorders 13(14.8%), Anxiety Disorders 9(10.2%), Neurocognitive Disorders 7(8.0%) and Bipolar and Related Disorders 4(4.5%) [Table 8].

Table 8 Frequency of Switched diagnosis

Diagnosis	Frequency	Percent
Depressive Disorders	25	28.4
Schizophrenia Spectrum and Other Psychotic Disorders	17	19.3
Neurodevelopmental Disorders	13	14.8
Anxiety Disorders	9	10.2
Neurocognitive Disorders	7	8.0
Bipolar and Related Disorders	4	4.5
Obsessive Compulsive and Related Disorders	3	3.4
Somatic Symptom and Related Disorders	3	3.4
Medical illness	3	3.4
Trauma and Stressor Related Disorders	2	2.3
Sleep Wake Disorders	1	1.1
Personality Disorders	1	1.1
Total	**88**	**100.0**

Table 9 Characteristics of switched diagnosis

Switched diagnosis

Diagnosis	NDD	Schizophrenia Spectrum and Other Psychotic Disorders	Bipolar and Related Disorders	Depressive Disorders	Anxiety Disorders	OCD	SSD	NCD	MI	Total
NDD	12	-	-	-	-	-	-	-	2	**14**
Schizophrenia Spectrum and Other Psychotic Disorders	-	8	1	2	3	-	-	2	1	**17**
Bipolar and Related Disorders	-	1	-	1	-	-	-	-	-	**2**
Depressive Disorders	-	6	2	13	3	2	2	2	-	**32**
Anxiety Disorders	-	1	1	3	1	1	-	1	-	**9**
TRD	-	-	-	1	-	-	-	-	-	**1**
DD	-	1	-	1	-	-	-	-	-	**2**
SSD	-	-	-	3	2	-	-	-	-	**5**
Sleep Wake Disorders	-	-	-	1	-	-	-	-	-	**2**
NCD	-	-	-	-	-	-	-	2	-	**2**
MI	1	-	-	-	-	-	1	-	-	**2**
Total	**13**	**17**	**4**	**25**	**9**	**3**	**3**	**7**	**3**	**88**

Others: 1 Anxiety disorder and 1 sleep wake disorder were switched to trauma and related disorders. 2 depressive disorder were switched to sleep wake disorder and personality disorder respectively.

4.1.6 Reason for switched diagnosis

The most common reason for switching the diagnosis was not stated in 36(40.9%) of the switched diagnosis. Having the psychotic symptoms were the reason for switching in 14(15.9%) of the switched diagnosis followed by anxiety symptoms 7(8%) and 5(5.7%) depressive symptoms. Manic symptoms, repetitive behaviors, panic-like symptoms are also other reasons stated for switching the diagnosis [Table 10].

Table 10 Reason for switched diagnosis

Switched diagnosis	Frequency	Percent
Reason not available	36	40.9
Psychotic symptoms	14	15.9
Anxiety symptoms	7	8
Depressive symptoms	5	5.7
Manic symptoms	4	4.5
Repetitive behaviors	4	4.5
Abnormal body movement	3	3.4
Forgetfulness	3	3.4
Somatic symptoms	3	3.4
Obsessive symptoms	2	2.3
Panic symptoms	2	2.3
Disorganized behaviors	1	1.1
Dissociative symptoms	1	1.1
Hyperactive	1	1.1
Mood symptoms	1	1.1
Somatic delusion	1	1.1

Total	**88**	**100.0**

4.1.7 Clinician who switched the diagnosis

From the total of 88 switched diagnosis 10 were first seen by first-year residents, 36 were by second-year residents, 27 were seen by third-year residents, and 15 were seen by senior. First-year residents switched 18 of the patients' diagnosis, 28 of them switched by second-year residents, 26 by third-year residents, and 15 by senior and 1 by clinical psychologist [Table 11].

Table 11 Clinician who switched the diagnosis

	Diagnosis switched by					
First seen by	**First-year resident**	**Second year resident**	**Third-year resident**	**Senior**	**Clinical psychologist**	**Total**
First-year resident	2	5	2	1	-	**10**
Second-year resident	8	16	9	2	1	**36**
Third-year resident	7	7	13	-	-	**27**
Senior	1	-	2	12	-	**15**
Total	**18**	**28**	**26**	**15**	**1**	**88**

4.1.8 Modality of treatment

In the psychiatry outpatient department of TASH, the service was provided in different modalities for patients with different psychiatric disorders. From the 981 charts reviewed 868 had a recorded diagnosis and from this 818(94.2%) patients received different modes of treatment. From those 585(71.5%) patients have treated only with medication, 191(23.3%) patients treated with only psychotherapy, 27(3.3%) of them with medication and psychotherapy, and 15(1.8%) were referred [Table 12].

Table 12 Modality of treatment

Mode of treatment	Mode of treatment used by						Frequency	Percent
	First year resident	Second year resident	Third year resident	Senior	Clinical psychologist	Missing		
Medication	111	249	122	102	1	-	585	71.5
Psychotherapy	44	87	43	10	4	3	191	23.3
Medication + psychotherapy	6	8	8	5	-	-	27	3.3
Referred	3	7	5	-	-	-	15	1.8
Total	**164**	**351**	**178**	**117**	**5**	**3**	**818**	**100.**

4.1.9 Prescription Pattern

Among the different classes of drugs prescribed, patients were prescribed with single medication and combined medication. From the recorded medications risperidone was the most prescribed medication in 191(31%) followed by fluoxetine in 101(16.4%), amitriptyline 72(11.7%), imipramine 34(5.5%), sertraline 30(4.9%), and olanzapine 22(3.6%) [Table 13].

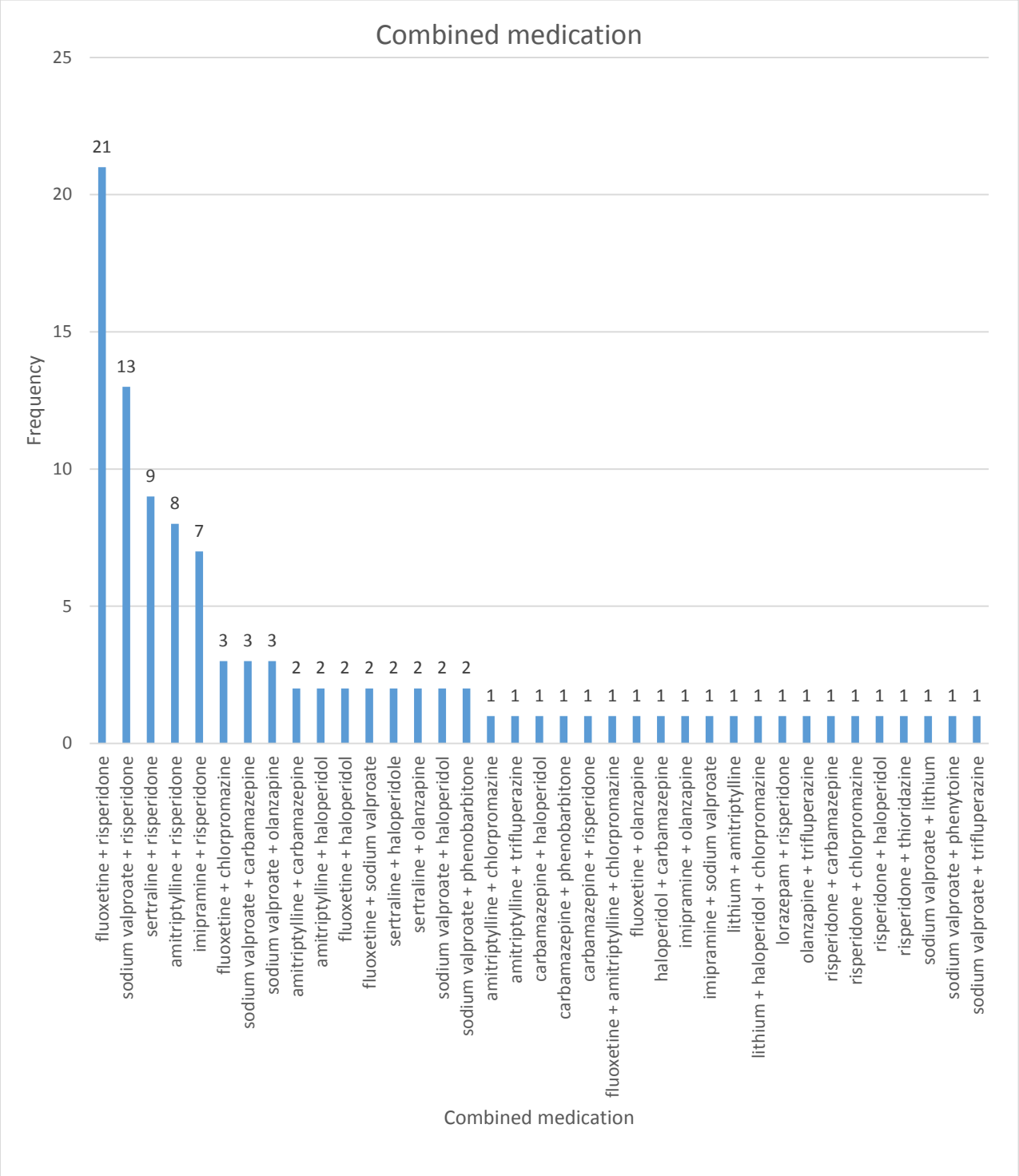
From the combined drugs fluoxetine with risperidone 21(3.4%) is the most prescribed combination followed by sodium valproate with risperidone 13(2.1%), sertraline and risperidone 9(1.5%), imipramine and risperidone 7(1.1%), fluoxetine and chlorpromazine 3(0.5%), sodium valproate and olanzapine 3(0.5%) [Figure 1].

Table 13 Frequency of psychotropic medication

Single medications	Frequency	Percent
Risperidone	191	31
Fluoxetine	101	16.4
Amitriptyline	72	11.7
Imipramine	34	5.5
Sertraline	30	4.9
Olanzapine	22	3.6
Fluphenazine deconate	10	1.6
Chlorpromazine	9	1.5
Phenobarbitone	8	1.3
Sodium valproate	6	1
Haloperidol	5	0.8
Others**	25	4.1

*Others*** Sildenafil, Carbamazepine, Promethazine, Trifluperazine, Bromazepam, Phenytoin, Thioridazine, Benzodiazepine, Clomipramine, Lithium and Trazodone

Figure 1 Frequency of combined psychotropic medications



4.1.10 Clinical diagnosis and modality of treatment

Most of the clinical diagnosis were treated with medication in most of the cases and followed by psychotherapy [Table 14].

Table 14 Clinical diagnosis comparing to modality of treatment

	Mode of treatment				
Diagnosis	**Medication**	**Psychotherapy**	**Medication + psychotherapy**	**Referred**	**Total**
Neurodevelopmental Disorders	81	57	5	2	**145**
Schizophrenia Spectrum and Other Psychotic Disorders	166	3	1	4	**174**
Bipolar and Related Disorders	32	-	1	-	**33**
Depressive Disorders	155	18	12	1	**186**
Anxiety Disorders	35	23	1	-	**59**
Obsessive Compulsive and Related Disorders	1	1	-	-	**2**
Trauma and Stressor Related Disorders	8	18	2	-	**28**
Dissociative Disorders	2	1	-	-	**3**
Somatic Symptom and Related Disorders	29	23	3	2	**57**
Elimination Disorders	-	2	-	-	**2**
Sleep Wake Disorders	10	4	-	-	**14**
Sexual Dysfunctions	6	3	-	-	**9**
Gender Dysphoria	-	1	-	-	**1**
Substance Related and Addictive Disorders	4	4	-	3	**11**
Neurocognitive Disorders	19	7	-	-	**26**
Personality Disorders	1	1	-	-	**2**
Child sexual abuse	-	14	-	-	**14**
Medical illness	36	5	2	2	**45**
No major psychiatric diagnosis	-	6	-	1	**7**
Total	**585**	**191**	**27**	**15**	**818**

4.1.11 Clinician who examined Child and adolescents

More than half of the child and adolescents are evaluated by first and second year residents [Table 15].

Table 15 Clinician who examined Child and adolescents

Age	First year resident	Second year resident	Third year resident	senior	Unspecified	Total
2	1	1	1	-	-	**3**
3	1	3	10	1	1	**16**
4	2	11	7	1	-	**21**
5	2	8	8	-	1	**19**
6	1	5	9	-	1	**16**
7	2	10	7	1	-	**20**
8	-	6	7	2	1	**16**
9	-	10	7	2	1	**20**
10	-	7	4	-	-	**11**
11	2	2	5	4	1	**14**
12	2	4	3	1	2	**12**
13	1	3	2	-	2	**8**
14	1	7	3	-	3	**14**
15	2	4	4	4	-	**14**
16	3	6	5	2	-	**16**
17	2	6	1	2	1	**12**
18	6	8	3	4	3	**24**
Total	**28**	**101**	**86**	**24**	**17**	**256**

4.1.12 Missing data and medical record keeping

Out of the 981 reviewed electronic medical records, 112 of the records were only included the age, sex and address variables. From those 981 there were 869 socio-demographic variables were recorded. And out of this about 435(50.1%), 400(46%), 337(38.8%), and 300(34.5%) didn't have the important information like religion, education, occupation and marital status of the patients respectively [Table 16].

Table 16 Missing information of study subjects in TASH

Characteristics	Frequency	Missing
Education	469 (54%)	400(46%)
Occupation	532 (61.2%)	337(38.8%)
Marital status	569 (65.5%)	300(34.5%)
Religion	434 (49.9%)	435(50.1%)
Total	**869**	

5. Chapter Five

5.1. Discussion

In this study, out of 981 charts revised ages of the respondents ranged between 2-84 years with a mean age of 30.53 years. The age range from 25 to 35 consists of 246 (25.1%), the largest of all the patients in the care. The number of male patients were 54.5% and 45.5% were female. Similarly in a tertiary care hospital in India out of 560, 51.4 % of patients were males and 48.6% were females. The ages of the respondents ranged between 2-83 years with a mean age of 34.1 years. (16)

The two most common classes of mental disorders worldwide are anxiety and depressive disorders, as high as 18% for anxiety disorders and 9% for mood disorders. (20) Using the WHO Assessment Instrument for Mental Health Systems (MHS), data on the Saudi MHS were collected in 2009–2010 among patients treated in mental health facilities, 40% were treated in mental hospitals, 50% in outpatient facilities (including clinics within general medical hospitals) and 10% in other facilities. Within the Saudi MHS, the majority of patients treated in outpatient settings had neurotic (36%) or mood disorders (35%). (20) The prevalence of common mental disorders in the Ethiopian population range from 23 to 58 % in a different medical setting. (19)

In these study, it was observed that the majority of patients had a single diagnosis 782 (90%), and 138 (15.9%) of patients had two, and 5 (0.57%) had three diagnoses. As shown in Table 5, depressive disorder appears to be the most common diagnosis 190 (21.9%), followed by schizophrenia and other psychotic spectrum disorder 180 (20.7%), neurodevelopmental disorder 149 (17.2%), Anxiety disorders 61 (7%) and Somatic symptom and related disorders of 59(6.8%). In addition, the study showed

that the medical illnesses were a significant finding which accounts for 50 (5.8%) as a primary diagnosis and 80(58%) as a second diagnosis even if it is the psychiatric outpatient clinic. This was due to most of the cases were referred from the other clinics in the hospital and most of them had a comorbid medical illness when they were linked to the psychiatry clinic. Similarly, a study done in Saudi Arabia shows that the most common psychiatric diagnoses were major depressive disorder (29.3%) and schizophrenia (28.9%). (20) But on the contrary in their finding, there is a low rate of anxiety disorders (16.3%) from 1205 participants in the outpatient sample, which is the fourth common diagnosis in this finding (7%) of study subjects.

In the present study, the most common diagnosis in the psychiatric outpatient department of TASH is depressive disorders followed by schizophrenia and other psychotic spectrum disorders and neurodevelopmental disorders which is similar to the characteristics of diagnosis seen at yekatit 12 hospital. (21–23) Top ten diagnosis of Eka koteb and Zewditu hospital were also collected which are other sites where psychiatric service is run by psychiatry residents and psychiatrists. In Eka kotebe the report of cases revealed that the most common diagnosis were schizophrenia and other psychotic spectrum disorder followed by depressive disorders and bipolar disorder which had a different distribution of cases than TASH. (24, 25) At zewditu hospital schizophrenia and other psychotic spectrum disorders followed by depressive disorders and substance use disorders. (26)

In this study, the age and diagnosis distribution showed that neurodevelopmental disorders were most commonly seen with the age group of 1-15 years, followed by schizophrenia spectrum and other psychotic disorders which were more distributed in the age group of 25-35 similar with the distribution of depressive disorder in this

age category. But anxiety disorders and somatic symptom and related disorders were seen in the age category of 16-24.

With regard to gender and diagnosis distribution, this study indicated that schizophrenia spectrum disorders, neurodevelopmental disorders, child sexual abuse, Substance-Related and Addictive Disorders, neurocognitive disorders, and sexual dysfunction are more frequent among male while depressive disorders, trauma and related disorders and somatic symptom and related disorders are more frequent among females. But bipolar and related disorder, anxiety disorder, and sleep-wake disorders have the same frequency in both genders.

With regard to the switched diagnosis 88 diagnosis were switched and from those the major switch was on a depressive disorder to another depressive disorder, the second switch was schizophrenia spectrum and other psychotic disorders to another schizophrenia spectrum and other psychotic disorders and the last most common switch were from depressive disorders to schizophrenia spectrum and other psychotic disorders.

Most of the study subjects were treated with medication 585(71.5%) followed by psychotherapy 191(23.3%), and psychotherapy use as an adjuvant to pharmacotherapy is 27(3.3%). Comparing the mode of treatment and the level of residency, all of the three year residents recorded psychotherapy adjuvant to pharmacotherapy as their least use of type of modes of treatment. In contrast to this study a study done in Pakistan with a total of 985 study subjects the majority of them supported the use of psychotherapy as an adjuvant to pharmacotherapy (80.5%) and considered it a cost effective modality (60.7%). (17) Another study done in USA, which compared treatment modalities and perceived effectiveness of treatment among adults with depression found out that from 4169 study subjects medication

only was the least with a value of 371(9.2%), Counseling only 1012(23.1%) and both medication and counseling with the most used modality in 2786(68.7%). (18)

This study found that 256 of the studied subject were between the ages of 2-18 years and it accounts for about 26% of the studied subjects which is a significant number. Despite that these age groups were evaluated by more than half (50.4%) by first-year and second-year residents which is not the appropriate level of residency to evaluate that age group in the Ethiopia setup. **Literature**

Out of the total 981 patient records reviewed 112 were totally empty except recorded age, gender and address. The evaluation notes didn't include important information like religion 435(50.1%), educational level 400(46.1%), occupation 337(38.8%) and marital status 300(34.5%). A study done at Menelik II hospital revealed that incomplete evaluation will affect the quality of care and minimize the patients' satisfaction. (27) Participants dissatisfaction was related to the service provided during their follow-up by different health worker based on a study done at Gondar hospital. (28)

5.2. Conclusion

A retrospective chart review was performed on patients who were seen at outpatient department of psychiatry in TASH, the study found out that male gender were among the most frequent than the female in visiting the clinic. Across the country all subjects visit the clinic but the most visitors were from Addis Ababa. Having single marital status, a higher educational status, unemployment and religious category of Christianity were seen among the study subjects during the study period. Depressive disorders were the most frequent diagnosis seen followed by schizophrenia spectrum and other psychotic disorders. Among the age groups neurodevelopment disorders were seen between the ages 1-15, depressive disorders schizophrenia spectrum and psychotic disorders between 16-24 and 25-35 and neurocognitive disorders among 66-100 age groups. In this study, Schizophrenia Spectrum and Other Psychotic Disorders and Neurodevelopmental Disorders were more frequently seen in the male gender. In female gender, Depressive Disorders and Schizophrenia Spectrum and Other Psychotic Disorders were more dominated. Depressive disorders account for the largest switched diagnosis followed by Schizophrenia Spectrum and Other Psychotic Disorders, Neurodevelopmental Disorders and Anxiety Disorders. Most of the study subjects were treated with medication with the most prescribed drug being risperidone as a single drug and fluoxetine with risperidone as combined drug. Documentation problem was also assessed.

5.3. Recommendation

- Further research needs to be done about different variables mentioned in the study which lack information. This lack of completeness of the records seen

on some of the socio-demographic and diagnosis variables might affect the quality of healthcare.

- The study found significant number of child and adolescent, it is better to give emphasis on child and adolescent attachment of the residents.
- Strengthening the psychiatric attachment at the level of internship for better referral of the cases from other clinics in the hospital because more medical cases are seen at the OPD.
- As the result found out that TASH had similar diagnosis findings with other hospitals where psychiatric services are given by resident so it is better to consider residents rotation based on time slot.
- It is better to document and consult about switched diagnosis for having a consistent agreement.
- Documentation of the patients' data might be due to the lack of familiarity with the new I-care system, which might need further training on its use in the psychiatry department.

5.4. Limitation

- The data that was missing from the electro-medical recording system affects the generalizability of the outcome.
- This research can't conclude a cause-effect relationship among any of the variables mentioned above.
- The transition of using medical recording system was ensued in the last 2 years period so some data are missing due to lack of familiarity with the system.

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Annex

Data extraction sheet

I care no:	1. New 2. Repeat
Date of presentation to the clinic: Sep 11-Mar 9, 2020	
Age 1. 1-15 2. 16-24 3. 25– 35 4. 36-45 5. 46-55 6. 56-65 7. 66-100	
Sex: 1. Female 2. Male	
Area they come from: 1. Addis Ababa 2. Dire dawa 3. Amhara 4. Oromia 5. Tigray 6. SNNP 7. Afar 8. Somali 9. Benishangiul gumuz 10. Harari	
Formal education: 1. Elementary 2. High school	

3. Higher education 4. No formal education
Occupation: 1. Employed 2. Unemployed
Marital status: 1. Married 2. Single 3. Divorced 4. Widowed
Religion: 1. Christian 2. Muslim 3. Atheist

Diagnosis:

☐ Neurodevelopmental Disorders specify

☐ Schizophrenia Spectrum and Other Psychotic Disorders

☐ Depressive Disorders specify

☐ Bipolar and Related Disorders specify

☐ Anxiety Disorders specify

☐ Obsessive Compulsive and Related Disorders specify

☐ Trauma and Stressor Related Disorders specify

☐ Dissociative Disorders

☐ Somatic Symptom and Related Disorders specify

☐ Feeding and Eating Disorders

☐ Elimination Disorders

☐ Sleep Wake Disorders

☐ Sexual Dysfunctions

☐ Gender Dysphoria

☐ Disruptive, Impulse Control, and Conduct Disorders specify

☐ Substance Related and Addictive Disorders

☐ Neurocognitive Disorders specify

☐ Personality Disorders specify

☐ Paraphilic Disorders specify

☐ No major psychiatric diagnosis

☐ Medical illness

First Diagnosis(): Switched Diagnosis():

1st Seen by(): Switched by():

Treatment:

1 Medication

2 Medication + Psychotherapy

3 Psychotherapy

4 Referral