



**ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH
SCIENCES SCHOOL OF MEDICINE DEPARTMENT OF
PSYCHIATRY**

**PATHWAY OF PATIENT TO AMANUEL SPECIALIZED
MENTAL HEALTH HOSPITAL: A FACILITY BASED CROSS
SECTIONAL STUDY**

PRINCIPAL INVESTIGATOR: DR. TOFIK ABDELA

ADVISOR:

- PROFESSOR ATALAY ALEM (MD, PHD, PROFESSOR OF PSYCHIATRY)
- DR. ZERIHUN HAILE (MD, CONSULTANT PSYCHIATRIST)

*IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE SPECIALITY IN PSYCHIATRY*

NOVEMBER, 2021

**PATHWAY OF PATIENT TO AMANUEL SPECIALIZED
MENTAL HEALTH HOSPITAL: A FACILITY BASED CROSS
SECTIONAL STUDY**

By: Dr. Tofik Abdela (MD)

Email: tofabdela2@gmail.com

Advisors:

Atalay Alem, MD, PHD, Professor of Psychiatry, AAU, CHS, SOM, Department of Psychiatry

Signature:_____

Zerihun Haile, MD, Assistant Professor of Psychiatry, AAU, CHS, SOM, Department of Psychiatry

Signature:_____

Examiners:

Asnake Limenhe , MD, Forensic Psychiatrist, Assistant Professor of Psychiatry, AAU, CHS, SOM, Department of Psychiatry

Signature:_____

Getahun Belay, MD, Assistant Professor of Psychiatry, AAU, CHS, SOM, Department of Psychiatry

Signature:_____

Table of Contents

ABSTRACT.....	6
1. INTRODUCTION.....	7
1.1Background	7
1.2 Statement of the problem	8
1.3 Significance of problem	9
2. Literature Review	10
2.1 Over view of pathway to care.....	10
2.2 Pathway.....	10
2.3 Delays along the pathway to care	11
2.4 Factors affecting delay on pathway	12
3. Objectives.....	12
3.1 General objective	12
3.2 Specific objectives	12
4. Methodology	13
4.1. Study area and Study period	13
4.2. Source Population	13
4.3. Study Subjects	13
4.3.1 Inclusion criteria	13
4.3.2 Exclusion criteria	13
4.4 Study Design.....	13
4.5 Sample Size and sampling	14
4.6 Study variables	14
4.6.1Dependent	14
4.6.2. Independent.....	14
4.7 Data Collection Procedure	14
4.8 Data Quality Control	15
4.9. Data Processing, Analysis and Management	15
4.10 Ethical considerations.....	15
4.12. Result.....	16
4.12.1 Socio demographic Distribution	16
4.12.2. Help seeking behavior.....	18
4.12.3. Pathway to psychiatric care.....	19

4.12.4. Associations between delay and socio demographic characteristics.....	22
4.12.5. Associations between delay and Type of first care providers	23
4.12.6. Associations between delay and presenting complaint to first care provider	24
4.12.7. Associations between delay and diagnosis made at the psychiatric service	26
4.13. Discussion	27
4.13.1. Psychiatric service utilization	27
4.13.2. Strength and limitation of the study	28
5. Recommendation.....	29
6. References.....	30
Annex	31
Data Extraction Tool.....	31

Acknowledgment

I would like to express my heartfelt gratitude for Professor Atalay Alem for the unwavering support and assistance in preparing this thesis proposal. I would also like to thank Dr. Zerihun and Dr. Awoke for his guidance in preparing this Thesis.

I would also like to thanks my friends for their relentless support and encouragement.

Acronyms

ASMH- Amanuel Specialized Mental Hospital

GP- General Practitioner

LMICs-Low- and middle-income countries (LMICs)

MSc- Masters of science degree

BSc -Bachelor of Science

SUD- substance use disorder

OPD -out patient department

WHO - world health organization

SD- standard deviation

Dx- diagnosis

ABSTRACT

Introduction:- Pathway to care is a process in which a patient with mental illness goes through before seeking help from mental health professional. According to the Goldberg-Huxley model of the pathway psychiatric care in order to get visit to psychiatrists it should have to pass three filters starting from community setting.

Back ground:- The Pathway the patient influenced by many one of them is distribution of psychiatric care facility. In developed country the first focal point in pathway is General practitioner which looks identical to the Goldberg and Huxley model. In low- and middle-income countries (LMICs) most of the patients with mental illness seek treatment from the traditional and religious modality of treatment. A meta-analysis of pathway studies in sub-Saharan Africa indicates approximately equal initial choice of biomedical (49.2%) and alternative (48.1%) mental healthcare pathways. A study done on 2003 at ASMH also showed that less than half of mental illness patients directly contacted a mental hospital, and the median delay between onset of illness and arrival at the psychiatric hospital was 38 weeks. Other two studies done in Northern and South west Ethiopia showed than the median delay was 52 weeks.

Objective:- The objective of the study was to measure time of delay to reach Amanuel hospital from the onset of symptom to getting care. The effect of sociodemographic factors on the pathway to way care. It also tried to assess the associated factors which affect the delay to seeking modern psychiatric care. Generally it used to see the change that occurred in the past 18 years after implementation of different intervention on development of psychiatric care.

Method:- Directly data was collected from patient or attendant of patient who visited Amanuel Emergency and outpatient OPD for the first time from 16th, 2021 – July 31st 2021 with WHO encounter form. Once the data was collected it was exported to Excel spreadsheet and cleaned and checked for error and missing variable and, then it was exported to SPSS version 26 and descriptive analysis was done.

Result:- The study found the median delay to get psychiatric care at AMSH was 20 week where as in any modern institution who gave psychiatric service was 14 weeks. The study also found that young or old Age, being married or divorced, elementary or secondary school level of education, first point of care to traditional healer or religious treatment were predictors of delay to get psychiatric care.

1. INTRODUCTION

1.1 Background

Mental disorder is a syndrome characterized by disturbance in an individual's cognition, emotion regulation or behavior associated with significant distress on his/her important activities (1). Currently over 450 million people are thought to be suffering with mental disorder. Of these, only a small proportion of people get modern psychiatric care. Most of the patients in the developing country counts for the major portion of those who do not get modern psychiatric care (2). One of the reasons for this is lack of organized pathway to care.

Pathway to care is a process in which a patient with mental illness goes through before seeking help from mental health professional (3). According to the Goldberg-Huxley model of the pathway psychiatric care in order to get visit to psychiatrists it should have to pass three filters starting from community setting. It is concept of hierarchical pathway of developed country from the community to primary care to specialized psychiatric care facility via a chain of filters that influence a person who moves to the subsequent level of care(3).

In developed country the first focal point in pathway is General practitioner which looks identical to the Goldberg and Huxley model (3). In low- and middle-income countries (LMICs) most of the patients with mental illness seek treatment from the traditional and religious modality of treatment either as their first point of contact in the pathway to psychiatric care or exclusive way of care. A meta-analysis of pathway studies in sub-Saharan Africa indicates approximately equal initial choice of biomedical (49.2%) and alternative (48.1%) mental healthcare pathways (4). Even though the above result shows equivalent preference, there is difference on different regions of Africa. Mostly in eastern and western part of Africa there is dominance of traditional and religious alternatives.

In Ethiopia, health is traditionally defined as a state of equilibrium among the physiological, spiritual, cosmological, ecological and social forces associated with a person (5). Like most of African countries the explanatory model for mental illness is associated with supernatural force like being spirits that enter a person's body, or the shadow cast by an evil eye. Because of these reason patients come to modern psychiatric care after the failure of traditional and religious modality of treatment which leads to prolonged duration of untreated mental illness. A study also showed that less than half of mental illness patients directly contacted a mental hospital, and the median delay between onset of illness and arrival at the psychiatric hospital was 38 weeks (2). The prolonged time between onset and time of presentation to psychiatric care has negative consequence on the patients' response to psychotropic medication and symptom control. That patient may also have poor quality of life even if they get psychiatric care.

Different factors affect the pathway the patient follows like care seeking behaviors, attitude towards mental illness, referral systems of health care , ability of the health professional to identify the psychiatric disorder and availability of the mental health institution (6).

Amanuel Hospital was the only specialized mental hospital in Ethiopia which used to give inpatient treatment care for many years. During early times it accommodated between 530-580 inpatients on its limited number of beds (361 beds) and some patients used to share a bed (7). There were limited numbers of psychiatrists where most of them were foreigners.

Report from 2017 the ratio of mental health personnel to population ratio in Ethiopia is 1.74 per 100,000 people (8).When we see this segregated by profession, it has the following ratio psychiatrist 0.08, mental health nurse 1.00, psychologist0.04, social workers 0.04, occupational therapist 0.04 other paid mental health workers 0.54 per 100,000 people.

1.2 Statement of the problem

Improving access to modern psychiatric care is a crucial goal in many countries around the world. In the past 20 years a lot of work has been done to improve metal health care in Ethiopia in terms of training mental health professionals, decentralization of service, development of private services, and having public health priority. Currently with the exception of three regional states there is at least one psychiatrist in 7 regions and 2 federal cities of Ethiopia.

Even though all those Interventions have been done to make modern mental health service accessible to communities, there is still delay in presentation of patients to those facilities for psychiatric care. One hospital based study in western Ethiopia showed that only 35% of the patients with mental illness choose to visit modern psychiatric treatment primarily (2).There is also similar evidence from research done in northern part of Ethiopia in the prolonged time delay before presenting to psychiatric care (9).During this process, their condition becomes chronic and patients' health deteriorates. This delay in presentation, which is poor prognostic factor, for most of the illness leads to poor outcome. Due to this, the community loses faith in modern psychiatric care.

Even though there are two studies which were done in northern and southwest part of Ethiopia in recent years, they may not show the nationwide situation for pathway taken by patients with mental illness. A similar study was conducted at Amanuel Hospital in 2003 when residency program in psychiatry started at which time there were only 9 psychiatrists in public and a smaller number of psychiatric nurses outside Addis Ababa (5). One of the aims of the current study is to see if there is a change in the pathway to care after decentralization of mental health services and deployment of all categories of mental health workers has been made in the country. The study will assess places visited for help and the time taken before getting psychiatric care, and see the relationship between delay on the pathway to care and socio - demographic and clinical factors.

1.3 Significance of problem

It is well known that delay in treatment is one of the factors which lead to poor prognosis that affect all aspects of the patient's life negatively. Evaluations of pathway to psychiatric care have paramount importance in providing strategic information for preventing the cause for the delay of patients before they get care. This helps patients to avoid unnecessary expenditure of time and money; exposure to harmful treatment practice and to have good outcome by presenting early to care (9).

In addition to modern care, collaboration with traditional and religious treatments is important in a country like Ethiopia where there are 81 nationalities and cultures. Even though there is a lot of change in decentralizing mental health services in the country one needs to assess proper utilization of those services close to the community and try to understand why they are not utilized if the case is so. We believe that this research also indirectly showed utilization pattern of the locally available services. It will be used as evidence to develop proper strategy for intervention to avoid unnecessary delay to seek modern mental health care.

2. Literature Review

2.1 Over view of pathway to care

In many countries of the world most patients with mental illness come to care either by suggestion of the society after failure of alternative treatment or referred by other health professional (3). There are different factors that affect the pathway patient used like socio cultural, religious and economic factor (4).

One of the oldest proposed methods is The Goldberg-Huxley model of which was proposed by Goldberg in order to study the prevalence of mental illness in the UK (3). The major point of this model is that mentally ill patients go through different obstacles, which he called filter, before reaching to get specialist psychiatric visit. The process can vary from patient to patient. According to Goldberg, there are 5 levels and 4 filters which range from community to admission. There are two types of issues which arise in the use of the model, intrinsic and extrinsic issues. The intrinsic issues are those internal technical matters which have been amended, corrected or clarified on the basis of subsequent work (problems with the model itself), and the extrinsic issues are political and cultural issues surrounding the model (problems with its interpretation and application (3).

The Biomedical model is more of similar with the Goldberg model which dominated by scientific explanation of the mental illness (4). In this method there will be systemized way of assessing symptom and diagnosis which biomedical interventions used.

The Free market model (Traditional and Spiritual) healers are the most accessible method used in combination with biomedical professionals in sub-Saharan Africa. (4). This model is categorized into 2 sub-categories. These are, syncretic religious (spiritual or faith) healers and the traditional healers. In both case the supernatural power is the owner of healing. Even though both of them have their own peculiarity in both of them therapeutic process is mysterious which works to inspire awe in clients and dispose them more positively towards the therapeutic process.

2.2 Pathway

In a study done in 11 countries that had high number of psychiatrists per million population, Europe and Cuba, dominated by general practitioners and hospital doctors, most patients followed a route directly from the community to their general practitioners and straight on to the psychiatric services (6).

In Study done in Singapore over one third of the participants had their first contact with primary care (36.0%) followed by non-formal sources of help (33.8%), specialist care (21.8%), police/court (4.0%), websites/media (3.3%) and religious/traditional treatment (1.3%) (10). A majority of first contact was initiated on their own that is, self-referral (60.3%), followed by family/relatives' advice (25.0%), friends (4.8%), police / court (4.5%) and, others (5.5%) (10).

In a hospital-based research done in Indonesia the first source of treatment chosen by the subjects was traditional healers (78.0%), general practitioners (7.0 %), hospital doctors (6.0%), and community health centers (6.0%), with only two subjects (4.0%) visiting the mental hospital directly (11).

The overall proportion of patients that first sought care at the psychiatric hospital in Ghana was 52.3 %; another 23.3 % sought non-psychiatric treatment from religious or traditional healing centers as their first contact; 21.5 % sought treatment from non-psychiatric general hospital as first point of contact; and 2.9 % sought help from community health nurses and other community medical practitioners as their first point of mental health care contact (12).

A study conducted at Amanuel hospital at 2003, 41.0% of the patients came directly to the psychiatric center without having previously sought help elsewhere. However, among the rest, 30.9% initially sought help from priests/holy water or church, 21.5% consulted doctors in private or government hospitals, 4.5% contacted herbalists, and 2.0% saw general nurses or psychiatric nurses, and from there most patients proceeded to the psychiatric center via recursive pathways that involved several care providers (5).

2.3 Delays along the pathway to care

There are different factors that affect response to illness which include the extent of symptoms of an illness, the extent in which the symptoms disturb family and social activity, the tolerance of the patient, the cultural assumption to the illness, and availability and proximity to cost of treatment (4).

In a hospital-based research done in Indonesia the median interval between the onset of symptoms and first attendance at the mental hospital was 26.0 weeks (11). The distribution of this interval ranged widely from 2 days for patients with acute and transient psychotic disorders to 122 months for patients with dysthymia. The mean interval was unrepresentatively long at 75.0 weeks due to a few subjects with extremely long intervals; thus, the median value is a better representation of the interval than the mean value.

In Ethiopia the delay between first developing symptoms and arrival at the psychiatric center ranged from <1 week up to 45 years, with a mean value of 118.4 weeks and a modal value of 104 weeks (2). The median time was 38 weeks. Two research done in northern and south east part of Ethiopia show the median 52 weeks and 52.1weeks. (5) (9)

2.4 Factors affecting delay on pathway

A study from Singapore showed association between duration of untreated mental illness and marital status (10). In that study, there was longer duration in those who were separated /divorced /widowed compared to those who were single. Another study from Spain showed that level of education and occupation affect the duration of stay without seeking treatment.

Patients who sought help from traditional healers, particularly herbalists, have shown prolonged time to Seek psychiatric service (9). But in contrast to this it was shown that consultation with traditional healers was associated with the shortest delay before receiving specialist mental health care in Zimbabwe (13).

3. Objectives

3.1 General objective

To elucidate the pathway taken by patients to receive care at Amanuel Hospital

3.2 Specific objectives

1. To measure time taken to reach Amanuel hospital from their onset of symptom for psychiatric care
2. To assess the effect of socio-demographic factors on the pathway to care
3. To assess the relationship between the clinical presentation and pathway
4. To see if there is change in the pathway to care over the last 18 Years ; the similar study done at the same setting was 18 yrs back..

4. Methodology

4.1. Study area and Study period

The study was conducted at Amanuel Mental Specialized Hospital which is in Addis Ababa, Ethiopia. It is the first and the only specialized mental hospital in the country. Currently according hospital report a total of 250 health professionals (10 psychiatrists, 1 neurologist, 24 general practitioners, 35 MSc psychiatry professionals, 6 psychologists, 170 nurses, 42 pharmacists, 12 lab technicians) and 456 support staff are working in the Hospital. The hospital has 248 beds. Over 300 outpatients get seen in a day in eighteen outpatient clinics.

4.2. Source Population

The source populations were all psychiatric patients attending both emergency and outpatient clinic at Amanuel Mental Hospital.

4.3. Study Subjects

Any new patient from psychiatric emergency or outpatient clinic who fulfilled the inclusion criteria for the study. 'New patients' were patients who didn't have any psychiatric care previously from the Amanuel Hospital.

4.3.1 Inclusion criteria

Patients seen at AMSH for the first time from June 16th, 2021 – July 31st 2021 who had visited Amanuel hospital for the first time during the specified time were considered as new patients whether they had a previous psychiatric diagnosis or not at other facilities.

4.3.2 Exclusion criteria

1. Patients who were on follow up
2. Those who were unwilling to involve in the interview
3. Those were not able to communicate well due to disorganization and have no attendants to get collateral history.

4.4 Study Design

Hospital-based cross-sectional study design was employed.

4.5 Sample Size and sampling

Sample size was determined using single population proportion formula assuming that 50% of the participants would seek treatment soon after the onset of the problem at 95%CI and 5% margin error. Subsequent patients according to their registration taken as study participants when they finished seeing the clinician they were assigned to see until the required sample size is achieved.

Sample size calculation

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

N= sample size

Z= confidence interval

P= the proportion of the interest variable

W= the margin of error

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

4.6 Study variables

4.6.1 Dependent

- Pathway to psychiatric care
- Delay before first visit

4.6.2. Independent

- Socio-demographic variables,
- Duration of illness,
- Number of Places visited for help before coming to Amanuel,
- Diagnosis

4.7 Data Collection Procedure

Data collected using structured, interview questionnaire called encounter form which was prepared by WHO, translated into Amharic, and adapted for use in Ethiopia before. This questionnaire documents the care giver from whom help is initially sought (the first pathway contact), and then the next care giver (second pathway contact), the third care giver (third pathway contact) and finally the fourth care giver (fourth pathway contact) (14)

Because of the need to exercise the WHO-approved precautionary measures to prevent COVID-19 transmission an interview was done using Amharic translated structured questionnaire

by investigator and Residents verbally from each interview. The data collected under close supervision and facilitation by the principal investigator.

4.8 Data Quality Control

Brief training for the data collectors about the process of data collection was given before the study started. Close supervision was there by principal investigator during data collection and questionnaires were double-checked daily for consistency and completeness.

4.9. Data Processing, Analysis and Management

The data checked and edited for any incompleteness or inconsistency. Data analysis was done using SPSS statistical software version 26. Associations between the independent and dependent variables was tested using p value and 95 % Confidence Interval will be used to measure the strength of the association between the independent and dependent variables.

4.10 Ethical considerations

Ethical clearance was obtained by the Research Ethics Committee of the Department of Psychiatry, School of Medicine, College of Health Sciences, Addis Ababa University. Letter from the Research Ethics Committee was submitted and got permission from Amanuel specialized mental Hospital Chief Executive Office & Research Directorate and ethical committee. Before administering the questionnaire, the purpose of the study was briefly explained for the respondents and informed consent was sought from the participants. The participants were well informed that participation was voluntary and that they can stop the interview at any time without repercussions. The filled questionnaires kept anonymous and confidential.

4.12. Result

4.12.1 Socio demographic Distribution

A total of 384 participants were interviewed from June 16th, 2021 –July 31st2021. Of these, 243(63.7%) were males and the Age ranged from 7 to 82 years with a median of 28 years and a standard deviation of 13.59. The majority, 188 (49.0%) were between 18-30 years of age, regarding marital status, 171(44.5%) were single. Of the total participants, 204 (53.1%) were Christians while 103(26.8%) of them were Muslims and the remaining were Protestants. Around 216(56.3%) were unemployed. Patients came from different regions of the country, the majority came from Addis Ababa, 158 (41.1%) followed by Oromia 114(29.7%). Data were collected from 148(38.5%) patients directly while the remaining was collected from Attendants of patients (Table 1).

Table1:- Socio demographic characteristics of study participants, Amanuel Hospital, Addis Ababa, Ethiopia, 2021

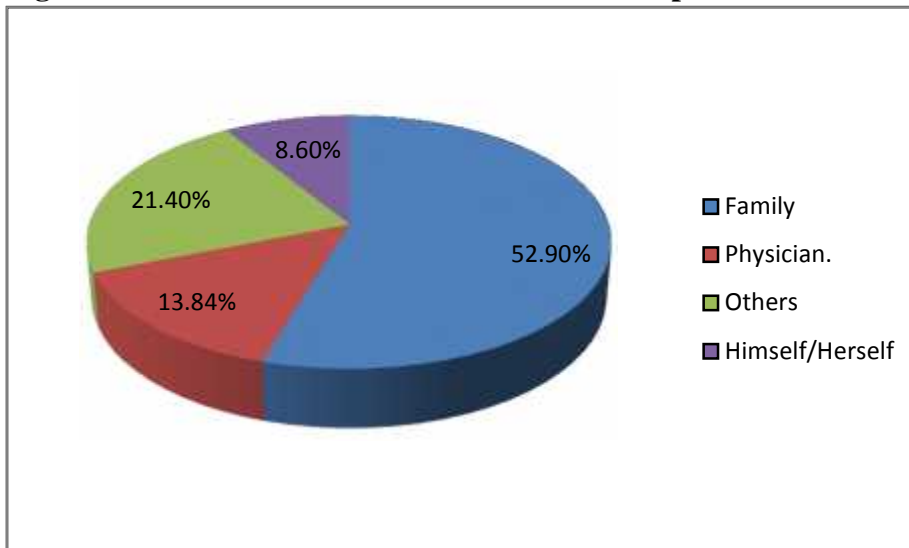
Participant	Frequencies	Percentages%
1.Attendant	236	61.5
2.Patient	148	38.5
Sex		
1.Male	243	63.3
2.Female	141	36.7
Age group		
1.Below 18	41	10.7
2.18-30	188	49.0
3.31-43	96	25.0
4.44-56	33	8.6
5.Above 56	26	6.8
Marital status		
1.Single	171	44.5
2.Married	161	41.9
3.Divorced	40	10.4
4.Widow/er	12	3.1
Address		
1.Addis Ababa	158	41.1

2.Oromia	114	29.7
3.SNNP	58	15.1
4.Amahara	40	10.4
5.Others	14	3.7
Educational status		
1.No formal education	62	16.1
2.Primary school	109	28.4
3.secondary school	114	29.7
4.Diploma	42	10.9
5.University /collage	12	3.1
6.Bsc and above	12	3.1
Religion		
1.Orthodox	204	53.1
2.Muslim	103	26.8
3.Protestant	77	20.1
Employment		
1.No	216	56.3
2.Yes	168	43.8

4.12.2. Help seeking behavior

Regarding how participants visit to Amanuel Hospital the majority 203 (52.9%) did so following advice from family members or relatives, followed by others 82(21.4%) like former patients, police or religious healers and Patient, self-referred 33(8.6 %) while the remaining 66 (13.84%) were advised or referred by health workers(figure 1). Of the participants, Amanuel Hospital was their first point of care for 46(12%). A similar pattern was followed by all participants who had visited other modern health institutions in general for their problem.

Figure 1:- source of advice to visit Amanuel Hospital



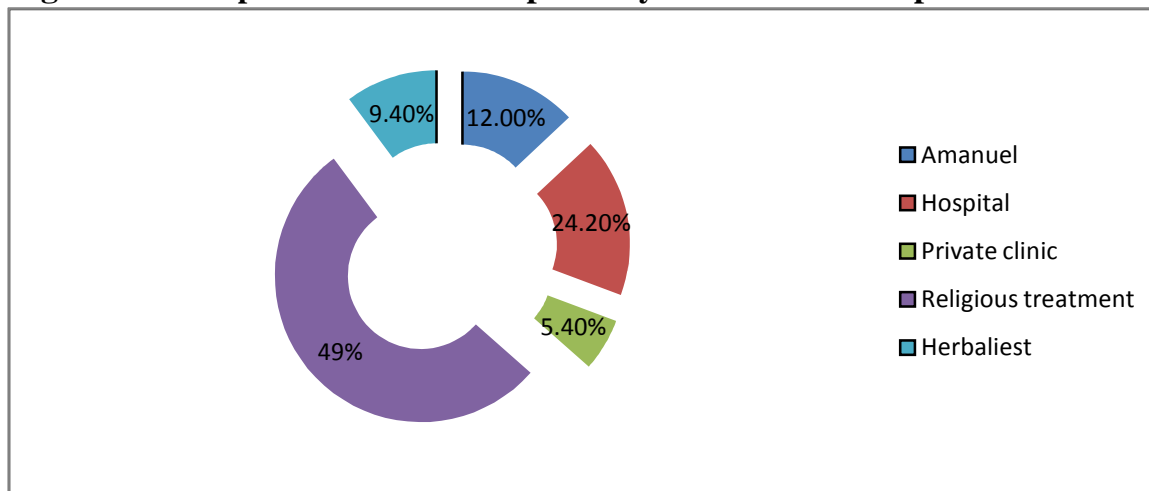
This study indicated that the time interval between onset of symptoms and first contact with psychiatric care facility was not normally distributed. The minimum and maximum time interval to seek treatment was less than 1 week and 936 weeks, respectively. Outliers with a very long delay were present. Therefore, after correction of data by square root transformation the median duration was used rather than mean duration. The median duration from problem onset to contact with modern psychiatric service was 14 weeks. Taking the median as a reference, delay to seek treatment was defined as time taken beyond 14 weeks from onset of symptoms. Based on this 178 (46.4) study participants had delay to seek treatment from modern health facility.

Regarding the time interval from onset of symptom to first contact to Amanuel was not normally distributed. The minimum and maximum time interval was from 1 week to 960 weeks, respectively. Outliers with a very long delay were present. Therefore, correction of data by square root transformation was done. Because the value of median and mean was equivalent the mean was taken. The mean duration from onset of the problem to contact with modern psychiatric services was 20 weeks. The time interval to receiving care was early for 206 (54%) and delayed for 178 (47%) study participants

4.12.3. Pathway to psychiatric care

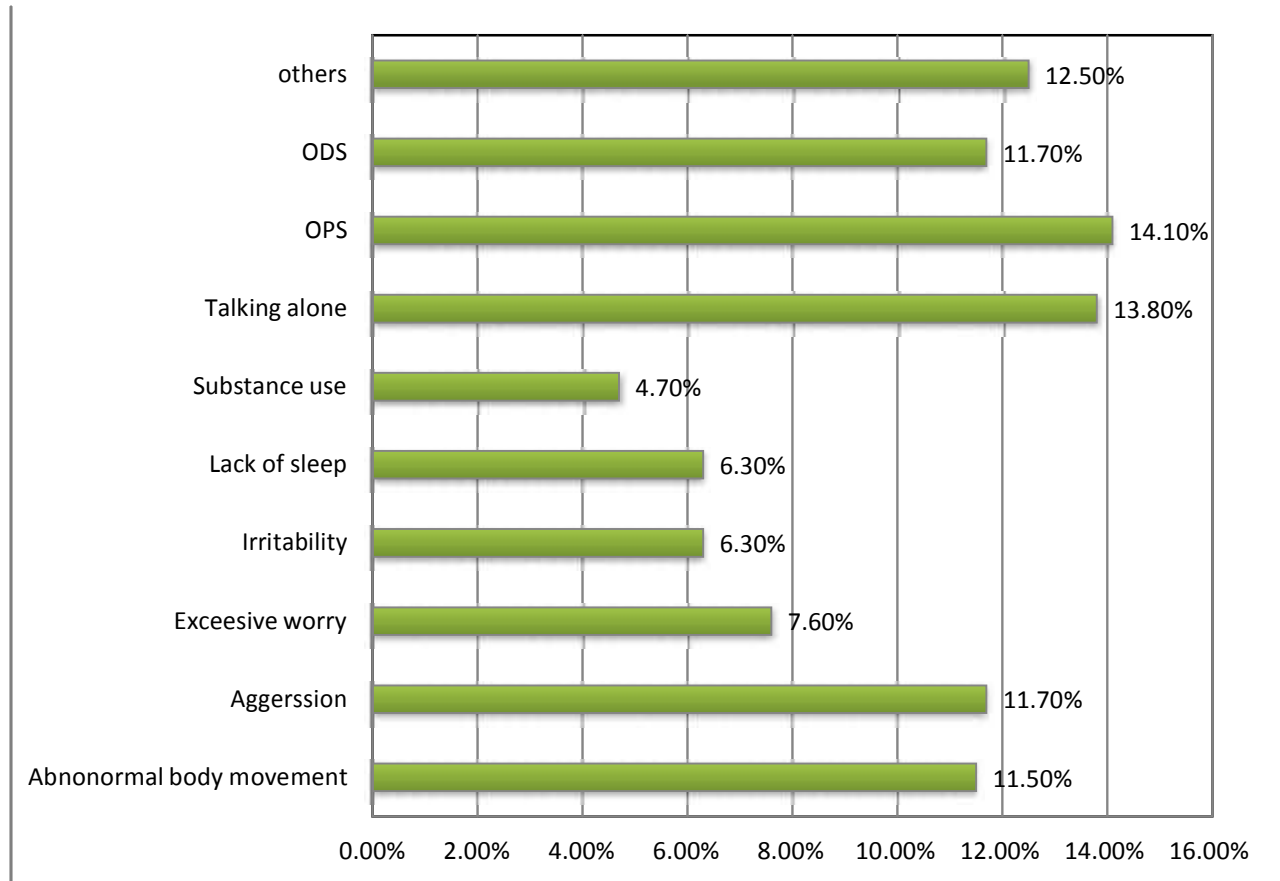
The routes that the patient followed to get psychiatric service at Amanuel are shown in figure 6. Around 154 (41.1%) of patient went to modern treatment site to seek help for the first time. Of these, around 24.7% first visited mental health service while others visited health center private clinic and hospitals that had no mental health professionals. Only 12.0% of them came directly to Amanuel Hospital. The remaining 58.6% visited traditional treatment sites such as holy water, other religious treatment sites and herbalists with 32%, 17.2% and 9.4%, respectively. Recursive pathways were commonly seen, particularly with those patients who went to priests at holy waters/church and Traditional healers. (see Figure 2)

Figure 2. First point of contact in pathway to Amanuel Hospital



The main sources of information on where to get help for their illness during first visit were family/relatives 279(72.7%), the patient himself 47(12.2%) and Others 52(13.5%) and remaining were from Physician. The main problems presented were, other psychotic symptom 54(14.1), Talking alone (13.8%), Abnormal body movement 44 (11.5%), and others 48 (12.5%) (figure 3).

Figure 3:- Major complaint of patient for the first visit

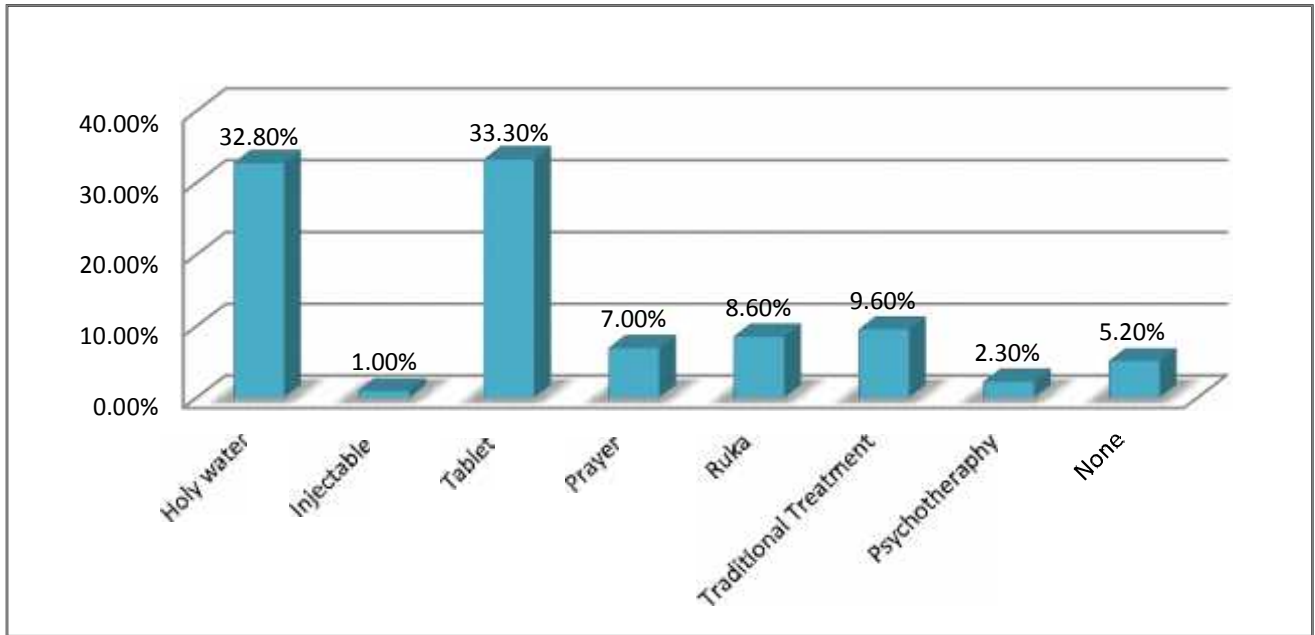


OPS –other psychotic symptom

ODS –other depressive symptom

Regarding the treatment received from the area they went to seek help 128 (33.3) of them were given Tablets, 126 (32.8%) of them got holy water treatment, 37(9.6%) of them got Traditional treatment, 37 (9.6%) had Ruqa treatment, 27(7%) used prayer (figure 4). The time duration took to reach the first place to seek for help ranges from 1 hour to 2 days. The mean time is 2.7 hours.

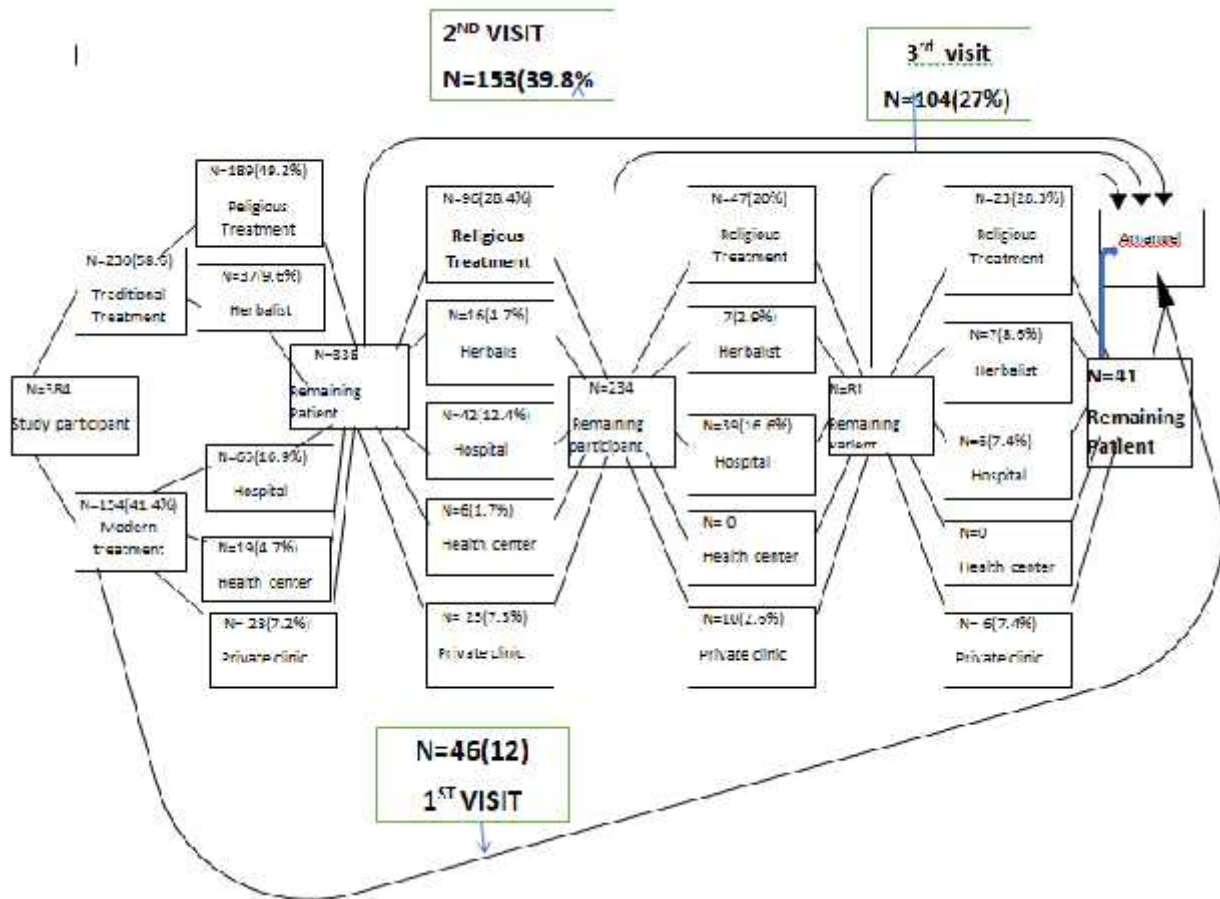
Figure 4:- Type of treatment received on the first point of care



As a second point of contact in the process of seeking help, of 338 study participants whose first contact was not Amanuel Hospital, 153(45.2%) sought help from Amanuel, 42(12.4%) from other hospitals, 25(7.3) and 6(1.7%) from health center. Of those modern treatment facilities, 85.8% provide psychiatric service of 185 participants who had three points of contact for help including Amanuel 104(56.2%) came to Amanuel Hospital, 17(16.3) other Hospitals and 10 (5.4%) private clinics. Out of this institutions, 68.1% provide psychiatric service.

The remaining 81 study participants had 4th visit and 40 (49.3%) of them visited Amanuel, 23 (28.3%) religious place, 6(7.4) other hospitals and 5(7.4%) private clinics. The rest, 7(8.6%) visited traditional healers.

Figure 5:- Pictorial representation of pathways to psychiatric care among patients at ASMH, Addis Ababa, Ethiopia, 2021



4.12.4. Associations between delay and socio demographic characteristics

The delay to seek care from Amanuel Hospital or any mental health facility differed significantly by socio demographic characteristics except for sex of patients. Regression coefficients of variables that showed significant influence on delay before seeking help at Amanuel and from any other modern mental health care providing institutions are summarized in Table 2 and 3. These tables show sex, being orthodox, marital status, level of education and coming from Addis Ababa have significant association with the delay to seek care from psychiatric service

Table2:- Regression coefficient of variables predicting delay before seeking care at the psychiatric service

Predictor variable		P	R ²
Age	0.036	0.008	0.018
Married	-1.079	0.004	0.021
Divorced	2.272	0.000	0.036
Muslim	0.872	0.039	0.01
Protestant	-1.96	0.000	0.046
Amara region	-1.035	0.004	0.022
No formal education	1.11	0.029	0.011
Mental health professional	-1.551	0.000	0.033
Priest	1.064	0.007	0.019
Sheikh	-1.582	0.049	0.01
Pastor	-1.582	0.049	0.01
Substance use	0.898	0.001	0.035
Anxiety Disorder	-2.364	0.02	0.014
SUD	3.145	0.000	0.036
Employed	-1.825	0.000	0.0361

4.12.5. Associations between delay and Type of first care providers

The delay between onset of symptoms and first seeking care at Amanuel differed by the type of service/care providers that patient first contacted in the pathway to care. Patients who were first seen by herbalists, priests and sheikhs tended to take longer (19 weeks) to arrive at the Amanuel than those who were first seen by physicians(18 weeks) Pastors (9 weeks), and health officers/nurses (14 weeks) .

The delay between onset of symptoms and seeking psychiatric care from any health institution that has mental health specialist differed by the type of first contact/care providers patients

visited prior to coming to institutions which provide psychiatric care . Patients who were first seen by Priests and sheikhs took 21 weeks, herbalists 18 weeks, Physicians 18 weeks, health officers/nurses 14weeks and Pastors 9 weeks to arrive at the any psychiatric service at facility.

Table3:- Regression coefficient of variables predicting delay before seeking care at the ASMH

Predictor variable		P	R ²
Age	0.039	0.006	0.02
Employed	-1.734	0.000	0.053
Married	-1.282	0.001	0.021
Divorced	2.85	0.000	0.055
Muslim	1.148	0.007	0.019
Protestant	-1.999	0.000	0.046
Addis Ababa	-0.766	0.048	0.01
Amara region	-0.766	0.048	0.01
Other regions	3.158	0.002	0.025
No formal education	1.123	0.03	0.12
Sheikh	1.94	0.018	0.15
Pastor	-1.94	0.018	0.12
Substance use	0.921	0.005	0.24
Anxiety Dis-order	-2.699	0.01	0.17
SUD	3.291	0.000	0.38

4.12.6. Associations between delay and presenting complaint to first care provider

The median delay between first developing symptoms and direct arrival at Amanuel and coming to Amauel via other routes according to the main problems presented to the first care provider is presented in Table 4.

In general, the delay varied according to the problem presented to the first care provider. Substance use, abnormal body movement, and talking alone were associated with the longest median delay 30, 19 and 19 weeks, respectively to come to Amanuel Hospital. However, substance use as a presenting problem to the first career did show a statistically significant influence on the delay before seeking psychiatric service at both Amanuel and other psychiatric service facilities ($p>0.05$).

Table4:- median time Amanuel visit

Presenting complaint	Frequency	Percent	Median
Abnormal body movement	44	11.5	19 week
Others	48	12.5	19 weeks
Aggression	45	11.7	16 weeks
Excessive worry	29	7.6	13 weeks
Irritability	24	6.3	13 weeks
Lack of sleep	24	6.3	13 weeks
Substance use	18	4.7	30 weeks
Talking alone	53	13.8	19 weeks
Other psychotic symptom	54	14.1	13 weeks
Other depressive Symptom	45	11.7	13 weeks
Total	384	100.0	20 weeks

Table5:- median time another modern

Presenting complaint	frequency	Percent	Median
Abnormal body movement	44	11.5	19 weeks
Others	48	12.5	13 weeks
Aggression	45	11.7	14 weeks
Excessive worry	29	7.6	8 weeks
Irritability	24	6.3	9 weeks
Lack of sleep	24	6.3	10 weeks
Substance use	18	4.7	30 weeks
Talking alone	53	13.8	19 weeks
Other psychotic symptom	54	14.1	12 weeks
Other depressive symptom	45	11.7	9 weeks
Total	384	100.0	14 week

Table 4 and 5 shows Median delay (weeks) between first onset of symptoms and arrival at the psychiatric service directly and via other routes versus main problems presented to the first carer

4.12.7. Associations between delay and diagnosis made at the psychiatric service

At Amanuel hospital, 42.4% of the patients received a diagnosis of schizophrenia and other psychotic disorders, 16.1% epilepsy, 11.5 % Depressive disorder, 11.7% Bipolar disorder, 5.2 % SUD ,4.7% Catatonia,3.4% anxiety and 4.9% others. Table 6 shows that the overall delay varied according to diagnosis in that patients who received a diagnosis of SUD had the longest delay (32 weeks), compared to other diagnoses and the finding was statistically significant.

Table6:- Median time of Dx at Amanuel

Diagnosis	frequency	Percent	Median
Anxiety Disorder	13	3.4	8 weeks
Bipolar Disorder	45	11.7	20 weeks
Catatonia	18	4.7	8 weeks
Depressive	44	11.5	13 weeks
Epilepsy	62	16.1	20 weeks
Others	19	4.9	20 weeks
Psychotic Disorder	163	42.4	20 weeks
SUD	20	5.2	32 weeks
Total	384	100.0	20 weeks

Table7:- Median time at modern facility

Diagnosis	frequency	Percent	Median
Anxiety Disorder	13	3.4	7 weeks
Bipolar Disorder	45	11.7	10 weeks
Catatonia	18	4.7	8 weeks
Depressive	44	11.5	11 weeks
Epilepsy	62	16.1	18 weeks
Others	19	4.9	13 weeks
Psychotic Disorder	163	42.4	14 weeks
SUD	20	5.2	31 weeks
Total	384	100.0	14 weeks

Table 6 and 7 shows Median delay (weeks) between diagnosis and arrival at the psychiatric service directly and via other routes versus main problems presented to the first carer

4.13. Discussion

4.13.1. Psychiatric service utilization

This study showed that 24.0% of the study participants accessed mental health services directly as first point of care. Half of these cases came to Amanuel directly without visiting other sites.. Of the remaining participants 53.0% visited psychiatric care centers as their second choice. Around 10.0% of the total participants came to Amanuel after visiting four treatment sites. Majority of the cases (58.6%) visited traditional and religious treatment sites first before going to other modern health service facilities. The median duration of illness until visiting any modern mental health services was 14 weeks whereas the median duration until the first visit to Amanuel Hospital was 20 weeks. Age, marital status, level of education, employment status, being protestant in religion and diagnosis were positive associated factors for the delay to seek modern mental health services.

The delay to seek mental health care in this study seems shorter when we compare it with other studies conducted in Ethiopia before, which were 38 to 52 weeks (5,9). This may be a reflection of increasing mental health service sites in the country over the last several years. Those who visited sheikh, priests and, herbalists as first choice experienced more delay to seek modern mental health care compared to those who first went to modern health services. This result is still delayed when we compare to study done in south Asia which the delay before getting care was 3 weeks (10).

When we see the utilization of service based on sex , there still dominance of male over female. These might also explain such a gender difference in health service utilization : first, men tend to be more violent and unmanageable in the community than women when they become psychotic and are therefore more likely to be seen at the psychiatric services. There is still difference care seeking which is the same like previous study different. The other explanation could be the dominance of paternalistic society, where in most cases men are breadwinners of the household and women are economically dependent, it may be the men who make the decisions about health-care seeking of the family. However, further study is necessary to determine the reason for gender differences in psychiatric service utilization.

There is improvement in referral system patient even if it is still low. Around 28.6 % patient has referral letter which twice than that of previous study (12.4%)(3). when we see recommendations to seeking care at the modern institution, still majority 250 (65.1%) of participants sought treatment for their illness with advice of family members or relatives, followed by others 70(18.2%) like former patients, police or religious healers and Patient Himself there is no significant difference on this trend. This shows that Because of the lack of a proper referral pathway and the presence of a substantial number of patients by- passing

lower levels of care, the mental hospital is seen to be overcrowded by all kinds of patients, including patients with physical problems and others whose problems could be managed at primary or secondary health-care level.

The study shows that there is difference in attending Amanuel hospital as the site of getting mental health care. The distribution showed that Addis Ababa(41.1%) and Oromia region (29.7%) are major of patients when compared to Others(3.6%) like Dire Dawa , Harari, Tigray, Afar and Somali. This can be explained by the distribution of mental health service facility into different regions when we compare to previous study (5).

The longest delay to visit Amanuel hospital was associated with diagnosis of SUD (32 weeks) rather than that of previous study in Amanuel which was Epilepsy (104 weeks). This may be explained by the increment of awareness about medical treatment of Epilepsy than that of previous belief of 'evileye' as proposed on previous study.

4.13.2. Strength and limitation of the study

One of the major strength of the study was usage of a pathway encounter form developed by a WHO collaborative study which is important in collecting data on the number of patients with mental disorders seeking service from both formal and informal sectors. In addition to that it also helps to identify major sources of consultation used by patients for psychiatric care. The study can also use to evaluate a change that occurs through those 18 years; the last time a similar study was done at the same setting ; with respect to work done improvement psychiatric service.

However, the study has its own limitations. First, the fact that the current study is done during times of COVID-19 and also Political crisis, those things might influence the flow of patient towards the hospital. The second was we relied on patients' or care givers retrospective recall of symptoms and duration of illness, and various care givers the patient visited before arriving at Amanuel, which might subject some of our data to recall bias. The third limitation could arise from social desirability bias, in that patients might not truly acknowledge some of their previous source of care like traditional healing. The other limitation is that because the study conducted in one tertiary mental health hospital among patient with mental illness and might not be generalized. As if it was cross-sectional study inferences about causality couldn't be made.

5. Recommendation

- Since half of the patient use traditional and religious treatment on the point of entry to care I recommend that there is still need of awareness creation about psychiatric illness in society.
- I recommend working with religious and traditional healer by teaching signs of mental illness which may help reduction of Delay.
- Still only quarter of patient had referral letter while visiting ASMH I recommend to improve referral system in our health facilities
- Since longest delay was showed on SUD patient I recommend Advocating on treatment of SUD to be continued.
- Finally I recommend on to work on decentralization of mental health service.

6. References

1. **APA.** *DIAGNOSTIC AND STATISTICAL MANUAL 5TH EDITION.* Washington D.C. : American Psychiatric publishing, 2013.
2. *Patterns of treatment seeking behavior for.* **Tesfaye2†, Eshetu Girma1* and Markos.** 2006, Biomedical psychiatry.
3. *The Goldberg-Huxley model of the pathway to psychiatric care.* **HUXLEY, PETER.** 1996.
4. *Pathway to Mental Health in Subsaharan - Africa.* **Ugo Ikwuka PhD MBPsS and femi ovebode MBBS, MD,PHD FRC psych.**
5. *Pathways to psychiatric care in Ethiopia.* **Y. Y. Bekele1, 2*, A. J. Flisher1,3, A. Alem2 and Y. Baheretebeb2.** 2008, Cambridge University Press.
6. *Pathway to psychiatric care a cros sectional study.* **R. GATER, 1 B. DE ALMEIDA E SOUSA, G. BARRIENTOS, J. CARAVEO,.** 1991, camberige .
7. *A descriptive analysis of admissions to Amanuel Psychiatric Hospital in Ethiopia.* **Abebaw Fekadu, Atalay Alem, Menelik Desta, Martin Prince.** Addis Ababa : Ethiopian Journal of Health Development, 2014.
8. *Mental health ATLSA member state profile.* 2017.
9. *Pathways to psychiatric care and factors.* **Senait Teshager, 1 Habtamu Kerebih ,2 Hailemariam Hailesilassie,3.** mekele , Ethiopia : s.n., 2019, british medical journal .
10. *Pathways to care among psychiatricoutpatients in a tertiary mental health institution in Singapor e.* **Anitha Jeyagurunathan1, Edimansyah Abdin1, Saleha Shafie1,.** 2018, International Journal of.
11. *Pathway to psychiatric care in Bali.* **TOSHIYUKI KURIHARA, md,1 MOTOICHIRO KATO, md,2 ROBERT REVERGER, md3.** 2006.
12. **Abdallah Ibrahim, Sidua Hor,Ozge S. Baha,Duah Dwomoh,Mary M. McKay,Reuben K. Esena.** *Pathways to psychiatric care for mental health.* ghana : s.n., 2016.
13. *Pathways to psychiatric care in teritary mental health facility in jaipur, India.* **nikhil jain, shiv gutam, sanjay jain, lalit batra, rashid sharma, harfuk singh,I. gupta D.** 2012, asian journal of psychiatry .
14. *WHO pathways to care.* geneva switherland : s.n., 2006.

Annex

Data Extraction Tool

አን ካውንት ር ፎርም ፤ፓዘዌይ ቱ ኬር (Encounter form/ pathway to care)

ሀ. የማህበራዊና ሕዝብ ነክ መረጃዎች

1. የጥናቱ ተሳታፊ ድርሻ	1 ታካሚ 2 አስታማሚ
2. ምታ	1 ወንድ 2 ሴት
3. ዕድም	_____ ዓመት/
4. የጋብቻ ሁኔታ	1 ያላገባ 2 ያገባ 3 ፍቺ የፈፀመ 4 ሚስት/ባል በሞት የተለየ
5. የመኖሪያ አካባቢ	1 አዱስ አበባ 2 ከአዲስ አበባ ወጪ አካባቢ ወን ይግግጹ _____
6. የትምህርት ደረጃ	1 መደበኛ ትምህርት ያልተማረ 2 1-4 3 5-8 4 9-10 5 11-12 6 የሙያ ትምህርት/ ኮላጅ ዲፕሎማ 7 የመጀመሪያ ዲግሪ 8. የሁለተኛ ዲግሪ 1. ኦርቶዶክስ 2. ሙስሊም 3. ካቶሊክ 4. ፕሮቴስታንት 5. ሌላ 1. አለኝ 2. የለኝም
7. ሀይማኖት	
8. ስራ አለህ/ሽ	

ለ . ስለ ማዕ ከሉኦ ናየአእም ሮጤ ናባ ለ ሙያው መረጃ

- 1. ሕመምተኛው የታየው የትክክር
2. የአእምሮ ጤና ባለሙያው ስም

- 3. የአእምሮ ጤና ባለሙያው ዓይነት.....
- 4. ቀን/...../..... (ቀ/ወ/ዓ/ዓ/ዓ)

ሐ. የእለ ቱየህ ክ ም ናጉብኝት

1. ዛሬ እዚህ መጥተው እንዲታከሙ ማን መከረዎት?

1.1. እኔ ራሴ ----- 1.2. ሐኪሜ -----

1.3. ቤተሰቤ ----- 1.4. የአገር ባህል ባለሙያ

1.5. ሌላ -----

2. የሪፈራል ወረቀት ይዘዋልን?

2.1. አዎ -----

2.2. አይ -----

3. ለዚህ ሕመም ዎ መፍትሄ ፍለጋ ባህላዊም ይሁን ዝመናዊ ሕክምና አገልግሎት በሚሰጥበት ቦታ ከአሁን ቀደም ሄደው ያው ቃሉ?

3.1. አዎ -----

3.2. አይ -----

መ. ለመጀመሪያ ጊዜ እርዳታ ለማግኘት ስለሄዱ በትሁኔታ

1. የሕክምና እርዳታ ለማግኘት የትሁኔታ? (ለምሳሌ፡ ጠበል፣ የሐገር ባህል ሕክምና አዋቂ ዘንድ፣ ውቃዬ በት፣ ቤተክርስቲያን (ጸሎት ቤት)፣ ጤና ኬላ፣ ጤና ጣቢያ፣ የግል ክለኒክ፣ ሆስፒታል፣ አማኑኤል)

2. መቼ? (አግባብ ያለውን ምረጡ)

ከ..... ቀናት በፊት ከ..... ወራት በፊት ከ..... ዓመታት በፊት

3. እዚያ ማን አየዎት? (ለምሳሌ፡ የሄልዝኤክስቴን ሽንሰራተኛ፣ ነርስ፣ ሄልዝኤሰር፣ ሐኪም፣ የአእምሮ ሕክምና ባለሙያ፣ ቁስ፣ ሼህ፣ የሐገር ባህል ሕክምና አዋቂ፣ ባለውቃቢ፣ ፓሊስ)

31. የተሰጠዎት ዋና ሕክምና ምንነብር? (ካለይገለጹ፣ ከሌለዎት ስለሌለዎት)

.....
.....

32. በመጀመሪያ ወደ ሕክምና ውብ ታላላቅ መድረስ ምን ያህል ጊዜ ወሰድብዎት?

ደቂቃ-----ሰዓት-----ቀናት-----

ሰ.

በአእምሮ ጤና ባለሙያ ውይይት ሰጠው ዲያግኖሲስ

1. የመጀመሪያ ዲያግኖሲስ

.....

2. ሁለተኛ ዲያግኖሲስ (ይህተጩ ማሪክንጂኦሎጂ ማራጭ አይደለም)

.....

1. የተሞላው

በ (ስም) ቀን
...../...../..... (ቀቀ/ወወ/ዓዓዓዓ)

2. ኮድ የተሰጠው

በ (ስም) ቀን
...../...../..... (ቀቀ/ወወ/ዓዓዓዓ)