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Prevalence of Common Mental Disorders and Factor Affecting among Patients of Health Facilities in Bishoftu, Ethiopia.

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APPROVAL SHEET
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Prevalence of Common Mental Disorders and Factor Affecting among Patients of Health
Facilities in Bishoftu, Ethiopia: a cross-sectional study

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LIST OF ABBRVATION

AAU:	Addis Ababa University
BHC:	Bishoftu General Hospital
Ca:	Cancer
CHQ:	China Health Questionnaires
CHS:	College of Health Sciences
CKD	Chronic kidney disease
CMD:	Common Mental Disorder
COPD:	Chronic Obstructive Pulmonary Disease
CVD:	Cardio Vascular Disease
DSM:	Diagnostic Statistics Manual
GBD	Global burden of disease
GHQ:	General Health Question
HADS:	Hospitalized Anxiety and Depression Symptoms
IRB:	Institutional Review Board
LSAD:	Legal Professionals with Stress, Anxiety and Depression
SPH:	School of Public Health
SRQ:	Self Reporting Question
SSS:	Social support scale

ABSTRACT

Background: Common mental disorders are disorders like depression, anxiety and somatic manifestations in addition to non-psychotic symptoms like fatigue, memory problem a major public health concern in low and middle income countries, including Ethiopia. However, limited evidence exists on their prevalence and associated factors among general outpatient patients in local health facilities.

Objective: To assess the prevalence of common mental disorders and associated factors among patients attending public health facilities in Bishoftu, Ethiopia.

Methods: A facility-based cross-sectional study was carried out between June 1 and July 24, 2024, in one general hospital and seven health centers located in Bishoftu.. A total of 560 patients aged >15 years excluding those with known psychiatric illness were selected using simple random sampling. Data were collected through a structured interviewer-administered questionnaire, including the Self-Reporting Questionnaire (SRQ-20) to screen for CMDs. Multivariable logistic regression analysis was used to identify factors associated with CMDs, with statistical significance set at $p < 0.05$.

Results: The prevalence of common mental disorders among the study participants was **40.4%**, which is higher than some national and regional estimates. Statistically significant associated factors included monthly income ≤ 1000 ETB (AOR=2.645, 95% CI: 1.032–3.779), diabetes (AOR=3.219, 95% CI: 1.595–8.029), hypertension (AOR=3.219, 95% CI: 1.595–8.029), cardiac illness (AOR=2.524, 95% CI: 1.163–5.477), moderate social support (AOR=3.415, 95% CI: 1.792–6.507), and poor social support (AOR=21.980, 95% CI: 11.590–41.685).

Conclusion: This study found a high burden of common mental disorders in Bishoftu, exceeding regional and national averages. Chronic medical conditions, low income, and inadequate social support networks were strong predictors of CMDs. The findings underscore the need for integrating mental health services into primary care and tailoring interventions to local contexts.

Keywords: Common mental disorders, SRQ-20

1. Introduction

1.2 Background

Common Mental Disorders (CMDs), encompassing symptoms of depression, anxiety, and somatic complaints, are a major and growing public health concern worldwide, particularly in low- and middle-income countries (LMICs)(1). These conditions are characterized by their high prevalence, chronic nature, and significant impact on individual functioning, productivity, and quality of life (2,3). CMDs often go undetected and untreated, especially in primary care settings, contributing to a cycle of disability, social exclusion, poverty, and diminished economic participation (4). In the context of global health priorities, CMDs are increasingly recognized as significant contributors to the overall disease burden, making their identification and management essential for achieving broader health system goals(5).

Globally, hundreds of millions of people are affected by CMDs, with the burden disproportionately affecting LMICs(6). CMDs impair individuals' capacity to maintain relationships, perform occupational roles, and manage daily life stressors, while also increasing vulnerability to chronic physical diseases (7). Despite their high burden, they are frequently underdiagnosed due to limited awareness, stigma, inadequate screening, and insufficient integration of mental health into general health care (8). Many health systems in developing countries prioritize infectious and acute physical illnesses over mental health, leaving CMDs largely neglected (9). This lack of attention compromises the wellbeing of affected individuals and weakens the efficiency and responsiveness of health care systems, especially in primary care settings. In sub-Saharan Africa and Ethiopia in particular, CMDs have emerged as a public health priority (10) yet their true burden and determinants remain underexplored in health facility-based contexts (11).

In Ethiopia, studies show that CMDs are common among both the general population and patients with various physical illnesses. However, many cases go unrecognized due to inadequate training of health professionals, resource limitations, and the absence of structured screening protocols (12). As a result, patients often experience worsening symptoms and long-term socioeconomic consequences(13). Several socio-demographic, clinical, and psychosocial variables have been

associated with CMDs. Socioeconomic hardship including low income, limited education, unemployment, and gender-related vulnerabilities has been consistently linked to higher CMD prevalence (14). Similarly, individuals with chronic conditions like diabetes, hypertension, or cardiovascular diseases are at increased risk due to the bi-directional relationship between mental and physical health(15). Psychosocial risk factors such as weak social support, major life stressors, family disruption, and high occupational stress further amplify CMD risk (14). Emerging research also highlights the roles of health literacy and self-care behavior in moderating CMD risk. Limited health literacy may hinder individuals from recognizing early symptoms, understanding treatment options, or adhering to medical advice, thus exacerbating mental health problems. Meanwhile, poor self-care behaviors such as non-adherence to medication, neglect of physical health, or limited stress-coping skills can further worsen mental health conditions. Despite their relevance, these factors remain underexplored in the Ethiopian context and are rarely integrated into routine mental health assessment in public facilities.

Bishoftu, a rapidly urbanizing town in Ethiopia's Oromia Region, represents a unique context for examining CMDs. The town's proximity to the capital, Addis Ababa, and its dynamic socio-economic transformation have created a population exposed to diverse stressors such as urban poverty, chronic illness, unemployment, and migration-related challenges all of which may elevate CMD vulnerability(16–18). Although some community-based studies have assessed CMDs, there is a notable gap in facility-based research targeting individuals actively seeking health care services(11). Such investigations are critical for integrating mental health screening into routine care and enabling early detection and intervention.

Therefore, this study aims to assess the prevalence of CMDs and identify associated factors such as socio-demographics, chronic illness, psychosocial stressors, substance use, health literacy, and self-care behavior among patients attending public health facilities in Bishoftu. The findings will support evidence-based strategies to improve early recognition and management of CMDs in primary care and inform health system strengthening at local and national levels(19).

1. What is the prevalence of CMDs? Among patients attending health facilities in Bishoftu Ethiopia
2. What are the socio demographic, clinical, substance use and psycho-social factors affect with CMDs.in health facilities Bishoftu, Ethiopia.

2.1 Statement of problem

Despite the increasing recognition of CMDs as a major contributor to the global burden of disease, they remain under-diagnosed and undertreated in many low- and middle-income countries, including Ethiopia. CMDs have a profound impact not only on individual health and functionality but also on families, communities, and health systems (20). The overlap of CMDs with chronic physical illnesses often complicates diagnosis and treatment, leading to poor health outcomes, increased healthcare utilization, and economic strain on already limited resources(5).

In Ethiopia, existing studies have revealed a high prevalence of CMDs in both community and clinical populations(21). However, most of these studies have been conducted in urban centers or focused on specific population groups, such as women or the elderly, leaving significant gaps in understanding the burden of CMDs in diverse and growing towns like Bishoftu. There is limited empirical data on the magnitude of CMDs and their associated factors among patients attending public health facilities in this context. Moreover, primary care settings in Ethiopia often lack the necessary tools and trained personnel to effectively identify and manage CMDs, resulting in a significant proportion of patients remaining undiagnosed and untreated(22).

Given the rapid urbanization and socio-economic transitions occurring in Bishoftu, the population is increasingly exposed to multiple stressors, including unemployment, housing insecurity, chronic diseases, and limited social support all of which are known risk factors for CMDs (23). Yet, no comprehensive facility-based study has been conducted in Bishoftu to estimate the prevalence of CMDs and to explore the contributing demographic, clinical, and psychosocial determinants. Without such data, it is challenging to design context specific strategies for early detection, prevention, and management of CMDs within the public healthcare system.

Therefore, there is a need to assess the burden of CMDs and identify the factors influencing their occurrence among patients in health facilities in Bishoftu. Addressing this knowledge gap will inform the integration of CMD screening into routine primary care and support the development of locally tailored mental health interventions that are feasible, sustainable, and culturally appropriate

1.3. Significance of the study

The results of this study will contribute to the limited body of research on mental health in Ethiopia, particularly in urban and semi-urban areas like Bishoftu. By identifying the prevalence and contributing factors of CMDs, the findings will help policymakers and healthcare providers:

- Recognize the hidden burden of mental disorders among general health facility attendees;
- Develop mental health screening tools suitable for primary healthcare settings;
- Allocate resources for mental health services at the local level;
- Plan for integration of mental health into existing health systems;
- Reduce stigma and increase awareness of mental health issues.

Furthermore, this study will support the Ethiopian Ministry of Health's strategic goals to decentralize and integrate mental health services within the primary care system.

2. LITERATURE REVIEW

2.1. Common mental disorder

Literature Review

1. Introduction to Common Mental Disorders:.

Common Mental Disorders (CMDs), typically comprising depression, anxiety, and somatoform disorders, are among the leading causes of disability worldwide, contributing significantly to the global burden of disease. CMDs affect individuals across all demographic categories, but they are more prevalent in low- and middle-income countries where healthcare systems face multiple challenges, including resource limitations and inadequate mental health integration into primary care services(24). The World Health Organization (WHO) has consistently reported that CMDs represent a major public health concern in both community and facility settings, particularly due to their high prevalence, that continues for long time, and high degree of correlation with socioeconomic hardship and poor health outcomes (25).

Prevalence of CMDs.

Globally, CMDs are responsible for a large proportion of years lived with disability (YLDs), with depression alone contributing to 4.3% of the global burden of disease(26). Studies have shown that CMDs affect not only psychological functioning but also physical health, leading to poor treatment adherence, increased comorbidity with chronic diseases, and higher mortality(27). Moreover, CMDs are known to impair individuals' occupational and social functioning, reduce economic productivity, and strain familial and community relationships(28). The relationship between CMDs and poverty is bidirectional: while poverty increases the risk of CMDs, these disorders can further deepen poverty through reduced work capacity and increased health expenditures(29).

In Africa, particularly in sub-Saharan regions, CMDs are increasingly recognized as a growing burden. Studies from countries such as Nigeria, Kenya, and Uganda report prevalence rates of CMDs ranging from 20% to 35% among adults in general populations and even higher among those seeking healthcare(30). These elevated rates are often attributed to sociopolitical instability, chronic poverty, communicable diseases (e.g., HIV/AIDS), and limited access to mental health

services. The lack of trained personnel and appropriate screening tools in primary care settings often leads to CMDs being misdiagnosed or ignored(31).

In Ethiopia, available evidence suggests that CMDs are widespread in both urban and rural settings, yet often underreported and undertreated. According to the study, CMD prevalence was found on community-based study in the South Gondar Zone reported a CMD prevalence was 29.7% among residents(2). People Living with HIV/AIDS (PLWHA) a systematic review and meta-analysis encompassing eleven studies revealed a pooled CMD prevalence of 26.1%(32)An institution-based cross-sectional study found that 39.2% of outpatient depending on the population studied the prevalence rates vary depending on the specific population studied and the assessment tools employed(33) A community-based study in Jimma reported that nearly 33.6% of the adult population screened positive for CMDs using the Self-Reporting Questionnaire (SRQ-20) with higher rates among women and individuals with chronic illnesses(34), adult patients attending HIV follow up service in Harar 28.1% (35),Cancer Patients at Black Lion Specialized Hospital, Addis Ababa 70.3%(36)A study focusing on patients with chronic non-communicable diseases at Jimma Medical Center found a 29.9% prevalence of anxiety being female and having co-morbid illnesses were significantly associated with higher anxiety levels(37). Another study from Addis Ababa showed that CMDs were common among outpatients in general hospitals, where physical symptoms often masked underlying psychological issues, leading to poor health outcomes and repeated consultations(21).

Factors affecting CMDs

Multiple socio-demographic and clinical factors have been linked to CMDs in the Ethiopian context. Low educational attainment, female gender, unemployment, and low income are consistently reported as major socio-demographic predictors(38). Chronic non-communicable diseases, such as diabetes mellitus, hypertension, and cardiac conditions, have also been strongly associated with CMDs due to the psychological stress involved in managing such lifelong illnesses(5). Furthermore, insufficient social support(5,32,36) exposure to recent stressful life events, and the pressures associated with urban living are widely acknowledged as key psychosocial factors contributing to the onset of common mental disorders (CMDs). These conditions can diminish individuals' resilience, limit their ability to cope effectively, and heighten emotional strain, thereby increasing the risk of developing CMDs in both urban and rural settings

in Ethiopia(39). Despite these findings, CMDs remain poorly addressed in routine health services, largely due to limited integration of mental health care into the general healthcare framework, lack of awareness among clinicians, and cultural stigma(40). Bishoftu, a rapidly expanding town in the Oromia region of Ethiopia, presents a unique context for examining the burden of common mental disorders (CMDs). The town's growing demographic and socioeconomic diversity, coupled with accelerating urbanization, increases the vulnerability of its residents to mental health problems. Urban environments in Ethiopia have been associated with higher rates of CMDs due to stressors such as unemployment, social isolation, and economic hardship(23). Despite these risks, no facility-based study has systematically investigated the prevalence of CMDs and their associated factors in Bishoftu. Given the local population's heightened exposure to determinants such as chronic illness, poverty, displacement, and limited mental health services, generating context-specific evidence is essential for targeted intervention and policy development(40).

While national strategies exist to improve mental health integration, including the Mental Health Gap Action Programmed (mhGAP), implementation remains slow and inconsistent, particularly in secondary towns (41).

To address these gaps, this study focuses on patients attending public health facilities in Bishoftu, where the healthcare system provides an opportunity to identify CMDs at the primary care level. By assessing the prevalence and factor affecting of CMDs in this specific setting, the study seeks to inform evidence-based interventions and support the integration of mental health screening into general health services. Such data are essential for planning training, resource allocation, and community awareness campaigns that target both healthcare providers and patients.

2.3. CONCEPTUAL FRAMEWORK

Conceptual framework for this study is developed based on the review of relevant literature concerning the prevalence and factor affecting of common mental disorder. The variables affecting problems under study were identified and then the association between dependent and independent variables are predicted as follow

Conceptual frame work

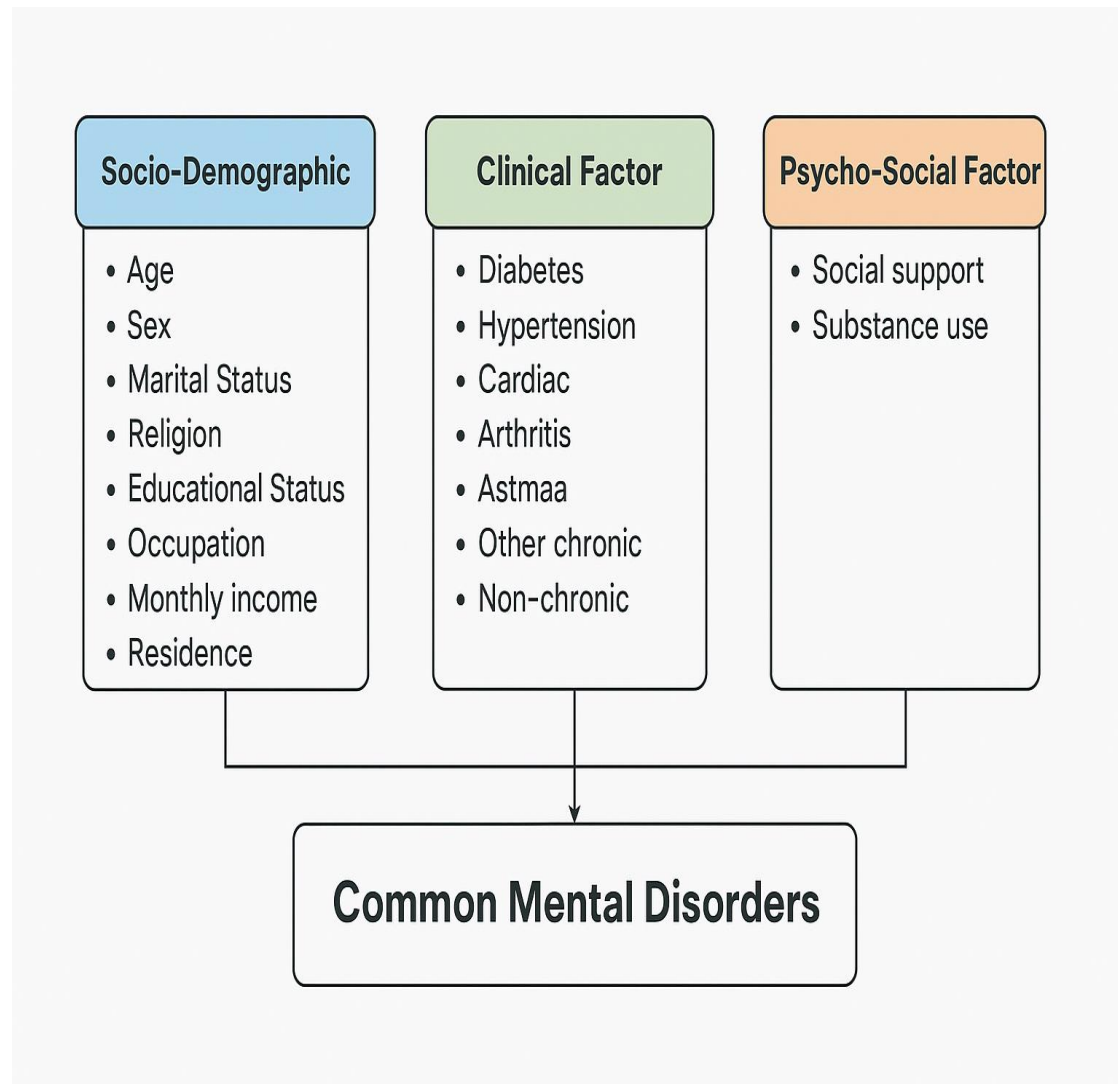


Figure 1 Conceptual framework based on literature review

3. OBJECTIVES

3.1. General objective

To assess the prevalence and factor affecting of common mental disorders among patients of Bishoftu General Hospital and Health Centers for other medical conditions.

3.2. Specific objectives

1. To assess the prevalence of common mental disorders among patients of at health facilities in Bishoftu town.
2. To identify associated factor (socio-demographic, clinical, psychosocial and behavioral) CMDs in the study population.

4. METHODS

4.1. Study setting

The research was conducted at public health facilities from June 1 to July 24, 2024. Bishoftu is placed 45 km south east of Addis Ababa, the capital city of Ethiopia. In 2020 the total population of the Bishoftu town and its neighbor Villages was 100,114 people of which men constitute 47,938 (47.8%) and women constitute 52,176 (52.2%). It lies 9°N latitude and 40°E longitude at an altitude of 1950 m above sea level. The town is divided into three sub cities, 9 administrative Kebeles with one General Hospital and seven Health Centers providing health services to community. These health facilities houses Bishoftu General Hospital, Keta Health Center (KHC), Bishoftu Health Center (BHC), Ququra Health Center (QHC), Cheleleqa Health Center (CHC), Dukem Health Center (DHC), Kilio Health Center and Babogaya Health Center, These health facilities serves hundreds of patients per day (43).

4.2. Study design

An institutional- based cross-sectional study was conducted to assess the prevalence and identify the associated factor of common mental disorder among attendees of health facilities.

4.3. Population

4.3.1. Source Population

The target population for this study comprised all patients who visit Bishoftu General Hospital and health centers seeking healthcare service during the study period. The public health facilities were chosen for this study was due to type of patients who visits the health facilities are both high and low income align with the study primary focus on assessing CMD.

4.3.2. Study Population

The study participants were all patients above 15 years encountered at Bishoftu public health facilities during the data collection period selected from the source population and included systematic random sampling selected patients who visit health facilities in Bishoftu General Hospital and health centers for medical conditions other than mental illness.

4.4. Eligibility criteria

4.4.1. Inclusion criteria

Patients who were all OPD registered and attending follow up health facilities for other medical conditions other than for mental illness were included in the study.

4.4.2. Exclusion criteria

Critically ill patients and patients under 15 years old were excluded

4.5. Sample size determination and sampling procedure

4.5.1. Sample size determination

For this study the sample size were calculated by using single population proportion formulae considering the following parameters;

Single population proportion formula was used to calculate the sample size: $n = \frac{z^2 \times P(1-P)}{d^2}$

Where, n= estimated sample size, Z= Z-score reliability coefficient for the desire confidence interval 95% = 1.96, P= prevalence rate of CMD 33.6% from a study on residents of Jimma Town, Southwest Ethiopia, d= acceptable margin of error for proportion being estimated = 0.05

Therefore, the sample size was calculated based on a prior study conducted in Jimma(34).

$$n = \frac{Z^2 \times P(1-P)}{d^2} = n = \frac{(1.96)^2 \times 33.6(1-33.6\%)}{(0.05)^2} = 344$$

The minimum calculated sample size was 344. On the calculated sample size 10 % were added to compensate for non-response rate 34 giving a total of 378 study participants. To account for the use of a multistage sampling design and the clustering effect, a design effect of 1.5 was applied, increasing the sample to 567. After adjusting for non-responses and logistical feasibility, the final sample size was set at 560 participants.

4.5.2. Sampling Procedure

We used a systematic random sampling procedure to select respondent and to ensure random selection and representativeness our sample we were calculating the sample interval by dividing the total daily average of patients by the calculated sample size. Some patients were not volunteer to participate on the study so we replaced them with other volunteer individuals with the same random selection process. This approach maintained the randomness and representativeness of our sample.

The sample size of 560 was distributed across each health facility based on the serving proportionate population size. Each health facility share was calculated by dividing the maximum expected sample size = 560 to total daily average of patients = 1145 to then multiplying number of daily visit patient on each health facility. The study units were all public health facilities. This sampling procedure is illustrated schematically in **figure 2**.

4.5.3. Schematic presentation (proportionally allocated by)

Prevalence of Common Mental Disorders and Associated Factors among Patients in Health Facilities in Bishoftu, Ethiopia

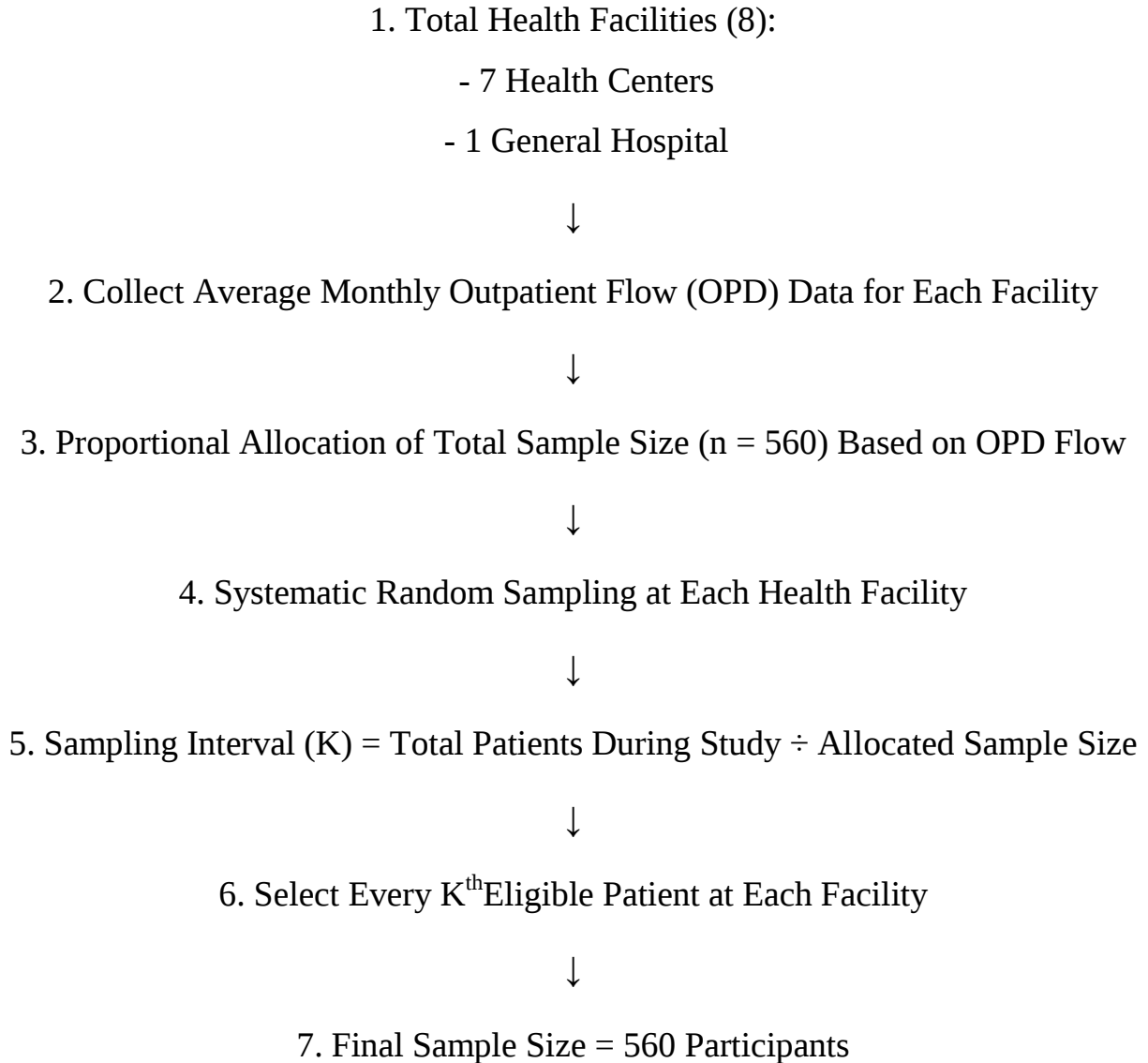


Figure 2.schematic presentation

4.6. Variables of the study

4.6.1. Independent variable

Socio- demographic: Age, Sex, Marital status, Religion, Residence, education, Occupation, monthly income

Clinical factor: Family member with mental illness, chronic physical illness (like diabetes, Hypertension, Cardiac, Asthma, Arthritis, other chronic and Non-chronic)

Behavior/substance use: Alcohol, Kaft, Cigarettes, Cannabis

Psycho-social: Social support

4.6.2. Dependent variable

Common Mental Disorders (CMDs.) which refer to the most prevalent conditions of mental illness classified under depressive episode, anxiety and somatic symptoms(30).

4.7. Measurement and Instruments

The questionnaire was structured into four sections. Socio-demographic information, Clinical factor, Behavior and Psychosocial. The questionnaire was adopted from a study titled “Prevalence of common mental disorders and associated factors among adults living in Harari regional state”(25). The original study reported a Cronbach’s alpha of 0.86 indicating very good reliability. Given that the participants were both literate and illiterate to the terms so the questionnaire was administered both in Amharic and Afaan Oromo and English.

A Self-reporting questionnaire (SRQ-20) was used to classify whether a common mental disorder was present or not. Each of the 20 items scored 0 or 1. A score of 1 indicates the presence of symptoms, and 0 indicates the absence of symptoms during the last month. The maximum score is, therefore, 20(30). A score above the cut-off point seven indicates the existence of a Common mental disorder and subjects who score less than 7 are considered to have no CMD.

The Oslo-3 Social Support Scale (OSS-3) was used to collect social support characteristics. The scale consists of three items. The sum score ranges from 3 to 14. By adding the three items, those with 3–8 values were considered to have poor social support, while those with 9–11 intermediate, and 12–14 values were considered to have strong social support (30).

4.8. Operational definition

Common mental disorders: (CMDs): In this study, CMDs refer to a group of mental health conditions characterized primarily by symptoms of depression, anxiety, and somatic complaints that are commonly encountered in primary healthcare settings. CMDs are measured using the Self-Reporting Questionnaire-20 (SRQ-20), a validated screening tool. A cutoff score of ≥ 7 on the SRQ-20 indicates the presence of CMD symptoms, based on prior studies conducted in similar contexts (30).

- **Chronic illness:** individuals who have at least one chronic disease (HIV/AIDS, hypertension, diabetes, any cancer, asthma, and heart disease etc.) “Presence of chronic diseases”.
- Social support is defined as the perceived availability and quality of emotional, instrumental, informational, and appraisal support received from family, friends, and the community. It is measured using the Oslo 3-item Social Support Scale (OSS-3). Scores are categorized as poor (3–8), moderate (9–11), or strong (12–14) social support(30).
- "Income categories were defined based on prior Ethiopian health studies and adjusted to reflect the local economic context of Bishoftu. Monthly income was classified as: low (<1000 ETB), middle (1000–2500 ETB), (2500-5000) and high (≥ 5000 ETB), in alignment with regional socioeconomic standards and World Bank poverty lines relevant to Ethiopia.
- **Substance Use:** Substance use is operationalized as the current or past consumption of alcohol, tobacco, khat, or other psychoactive substances. Assessment is based on self-reported use within the last 12 months.

4.9. Data collection procedure

Data collection was conducted from June 1 to July 24, 2024, by three trained nurses and one psychiatrist clinical supervisor. The questionnaire was administered through face-to-face interviews in Amharic, Afaan Oromo or English, depending on the participant's preference. A pre-test (5% of the sample) was conducted in a nearby health center to ensure clarity and reliability. We employed 3 registered nurses and one BSc clinical psychiatrist as data collectors and supervisor respectively. The data collectors were trained over one day for research purposes, the content of the data collection tools, ethical issues and how to deal with study participants. Supervisor has been trained to oversee participant recruitment, data collection and data quality review and control.

4.10. Quality assurance

Data quality was ensured by employing standardize and reliable data collection tool and technique. A previously validated questioner whose factor structured had been established through exploratory factor analysis in earlier research was utilized(25). Furthermore to uphold methodological rigor there was cross checking of the data for completeness and for missing value every day among the data collectors and the supervisor. The data-collection process was regularly and supportively followed up by the principal investigator. The principal investigator reviewed all collected data for completeness and consistency. Data entry was performed using excel then transported to SPSS data view. Prior to analysis, the principal investigator conduct checks for missing value and outlier to further ensure data quality and reliability.

4.11. Data management and analysis

Data were collected using paper-based questionnaires, coded, and entered into Microsoft Excel. The dataset was subsequently exported to the Statistical Package for Social Sciences (SPSS) version 25 for statistical analysis. Descriptive statistics, including frequencies and percentages, were used to summarize the socio-demographic and other relevant characteristics of study participants and presented in tables. Assumption testing was conducted using crosstabulations and the Chi-square test. Binary logistic regression analysis was used to explore the association between each independent variable and the outcome variable common mental disorder (CMD). In the bivariate analysis, each independent variable was entered into the model separately. Variables with a p-value less than 0.25 in the bivariate analysis were selected for inclusion in the

multivariable logistic regression model. In the final model, variables with a p-value less than 0.05 were considered statistically significant. The strength of association was assessed using adjusted odds ratios (AOR) with corresponding 95% confidence intervals (CI). Model fitness was assessed using the Hosmer-Lemeshow goodness-of-fit test, with a p-value of 0.12, indicating that the model adequately fit the data.

Regarding social support, responses were measured using a four- to five-point Likert scale ranging from "very difficult" to "very easy." Responses of "very difficult" and "difficult" were grouped as *poor* social support, while the remaining responses were categorized as *moderate* and *strong* social support levels (30).

4.12. Ethical consideration

Prior to filling out the questionnaire participants were informed of the study's purpose via a one page information sheet and written informed consent. The face to face self-administered questionnaire had not include any question about personal identifiers that could potential reveal participants' identities and questionnaires were collected in such a way that no third party or even the researchers could link specific respondents to completed questionnaires in order to ensure complete anonymity. The research ethics committee of the institution had issued ethical clearance prior to data collection with reference number SPH/454/2024. As detailed in the accompanying information sheet, participants were informed that no incentives or direct benefits were provided for their participation and respondents had the right to withdrawn from interviewing in completing the questioner at any time they wish without giving a reason. While we interviewed individuals who were between the ages 15-17 we were ensured the ethical standard of Institutional Review Board of college of Health Sciences Addis Ababa University informed consent is obtained from their care takers (44).

4.13. Dissemination plan

Result of this study will be disseminated to Addis Ababa University (AAU), College of Health Sciences (CHS), School of Public Health (SPH), Bishoftu Health Bureau and Bishoftu General Hospital, Health centers and will be published on scientific journal.

5. Results

5.1. Socio-demographic characteristics of respondents

All the initially planned (560) were participated in the study with 100% of response rate. Of these, (53% n = 297) were female and (47% n = 263) were male. The age distribution showed that the largest proportion of participants were between 15 and 24 years (30.7%, n = 172), followed by those aged 35–44 years (28.4%, n = 159), 25–34 years (26.1%, n = 146), 45–54 years (8.0%, n = 45), and over 55 years (6.8%, n = 38). In terms of marital status, nearly half of the participants were single (47.1%, n = 264), while (42.7% n = 239) were married. Divorced and widowed individuals comprised (6.8% n = 38) and (3.4% n = 19), respectively. Regarding religion, half of the respondents identified as Orthodox Christian, followed by one third were Protestant, and less than one fourth were Muslim, and other religions were less than two percent. Occupation-wise, students represented the largest group (29.1%, n = 163), followed by farmers (16.4%, n = 92), unemployed individuals (11.8%, n = 66), housewives (10.9%, n = 61), daily laborers (10.7%, n = 60), merchants (10.2%, n = 57), government employees (9.3%, n = 52), and retired individuals (1.6%, n = 9). With regard to educational status, (45.0% n = 256) had attained secondary education (grades 9–12), (27.5% n = 152) had completed primary education (grades 1–8), (19.3% n = 107) had a diploma or higher education, and (8.2% n = 45) were unable to read or write. Concerning monthly income, more than half of the participants (51.6%, n = 289) reported earning ≤ 1000 Ethiopian birr. Other income brackets included 1001–2500 birr (18.9%, n = 106), 2501–5000 birr (16.3%, n = 91), and ≥ 5000 birr (13.2%, n = 74).

Finally, the majority of the respondents resided in urban areas (72.3%, n = 405), while (27.7% n = 155) lived in rural settings (see table 1)

Table 1 Table 1. Socio-demographic and economic distributions of study participants in Bishoftu ,Oromia Ethiopia (n = 560)

Variable	Categories	Frequency	Percent
Sex	Male	263	47
	Female	297	53
	Total	560	100
Age	15-24	172	30.7
	25-34	146	26.1
	35-44	159	28.4
	45-54	45	8.0
	>55	38	6.8
	Total	560	100
Marital status	Single	264	47.1
	Married	239	42.7
	Divorced	38	6.8
	Widow	19	3.4
	Total	560	100
Religion	Orthodox	280	50
	Protestant	172	30.7
	Muslim	98	17.5
	Other	10	1.8
	Total	560	100
Occupation	Farmer	92	16.4
	governmental worker	52	9.3
	daily laborer	60	10.7
	Merchant	57	10.2
	house wife	61	10.9
	Unemployed	66	11.8
	Student	163	29.1
	Retired	9	1.6
	Total	560	100
Educational status	unable to read	45	8.2
	primary 1-8	152	27.5
	secondary9-12	256	45.0
	diploma and above	107	19.3
	Total	560	100
	≤ 1000	289	51.6
	1001-2500	106	18.9
	2501-5000	91	16.3
	≥ 5000	74	13.2
	Total	560	100
	Urban	405	72.3
	Rural	155	27.7
	Total	560	100

5.2. Clinical, Substance use and psychosocial factors of study participants

Among the total 560 study participants, various chronic medical conditions were reported. Diabetes mellitus and hypertension were each present in (18.4% n = 103) of participants. Cardiac illness and asthma were both reported by (11.4% n = 64), while (10.2% n = 57) had arthritis. Additionally, 8.9% (n = 50) had other forms of chronic illnesses, and (21.3% n = 119) reported having no chronic diseases. A family history of mental illness was reported by (18.7% n = 105) of the respondents, while the majority (81.3%, n = 455) had no known family history of mental illness. Regarding substance use, current cannabis use was low, reported by only (2.9% n = 16) of the participants. Current alcohol consumption of three bottles per day was reported by (17.1% n = 96), while the remaining (82.9% n = 464) did not report this level of alcohol use. Similarly, (13.6% n = 76) reported smoking half a packet of cigarettes per day, whereas (86.4% n = 484) did not smoke. Khat use was reported by (18.7% n = 105) of respondents, while (81.3% n = 455) denied current khat use. In terms of perceived social support, (42.8% n = 240) of participants reported having poor social support, (28.8% n = 161) had moderate support, and (28.4% n = 159) reported strong social support. **(See table 2)**

Table 2 .Distribution of clinical, substance use and psychosocial factors of study participants in Bishoftu health facilities Bishoftu Ethiopia, 2018 (n=560)

Variable	Categories	frequency	Percent (%)
Chronic medical illness	Diabetics	103	18.4
	Hypertension	103	18.4
	cardiac illness	64	11.4
	Asthma	64	11.4
	Arthritis	57	10.2
	Other chronic disease	50	8.9
	Non chronic diseases	119	21.3
family history of mental illness	No	455	81.3
	Yes	105	18.7
Current cannabis use	No	544	97.1
	Yes	16	2.9
Current alcohol use three bottle per day	No	464	82.9
	Yes	96	17.1
current cigarette smoking half packet perday	No	484	86.4
	Yes	76	13.6
current khat use	No	455	81.3
	Yes	105	18.7
Social support	Poor	240	42.8
	Moderate	161	28.8
	Strong	159	28.4
	Total	560	100

5.3. Prevalence of common mental disorder

The prevalence of common mental disorders among health facility patients in Bishoftu town using the cutoff point ≥ 7 and above was found to be 226 (40.4%) with 95% of CI (35.70–45.0%). The Self-Reporting Questionnaire (SRQ-20) was used to assess symptoms of common mental disorders among the 560 study participants. The most frequently reported symptom was feeling easily tired, noted by (33.6% $n = 188$) of participants. Headache and daily work suffering were both reported by (38.6% $n = 215$ and $n = 216$, respectively), followed by feelings of unhappiness (31.1%, $n = 174$) and loss of interest in things (26.1%, $n = 146$). Persistent tiredness was reported by (23.8% $n = 133$), while (21.1% $n = 124$) reported discomfort in the stomach. Symptoms such as poor appetite (18.7%, $n = 105$), difficulty in decision-making (18.6%, $n = 104$), and thoughts of ending life (18.6%, $n = 104$) were also notable. Additionally, (17.5% $n = 98$) of participants reported feeling nervous or tense, as well as experiencing poor digestion. Other symptoms included crying (17.3%, $n = 97$), feeling unable to sleep or oversleeping (16.4%, $n = 90$), feeling easily frightened (15.5%, $n = 87$), and trouble in thinking (15.5%, $n = 87$). A total of (14.5% $n = 87$) reported difficulty enjoying daily activities, and (16.8% $n = 94$) felt unable to play a useful part in life. less frequently reported symptoms included feeling like a worthless person (13.8%, $n = 77$), involuntary hand shaking (13.2%, $n = 74$). Overall, the SRQ responses indicated that a considerable proportion of participants experienced symptoms suggestive of psychological distress, warranting further assessment and possible intervention.

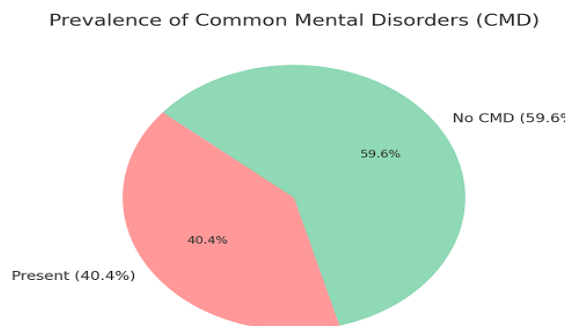


Figure 1: Prevalence of Common Mental Disorder among patients in health facility in Bishoftu town 2024 ($n=560$)

Figure 2

Table 2. Table 3 Distribution of SRQ symptoms among the study participants in Bishoftu health facilities Bishoftu, Ethiopia (n=560)

Variable	Categories	Frequency	Percent
Head ache	No	345	61.4
	Yes	215	38.6
	Total	560	100
Poor appetite	No	455	81.3
	Yes	105	18.7
	Total	560	100
Sleep badly (unable to sleep or sleeping long time)	No	470	83.6
	Yes	90	16.4
	Total	560	100
Easily frightened	No	473	84.5
	Yes	87	15.5
	Total	560	100
Hand shake(unconscious movement of the hand)	No	486	86.8
	Yes	74	13.2
	Total	560	100
feel nervous tens or worried	No	462	82.5
	Yes	98	17.5
	Total	560	100
poor	No	462	82.5
	Yes	98	17.5
	Total	560	100
Trouble in thinking	No	473	84.5
	Yes	87	15.5
	Total	560	100
feel unhappy	No	386	68.9
	Yes	174	31.1
	Total	560	100
Crying	No	463	82.7
	Yes	97	17.3
	Total	560	100

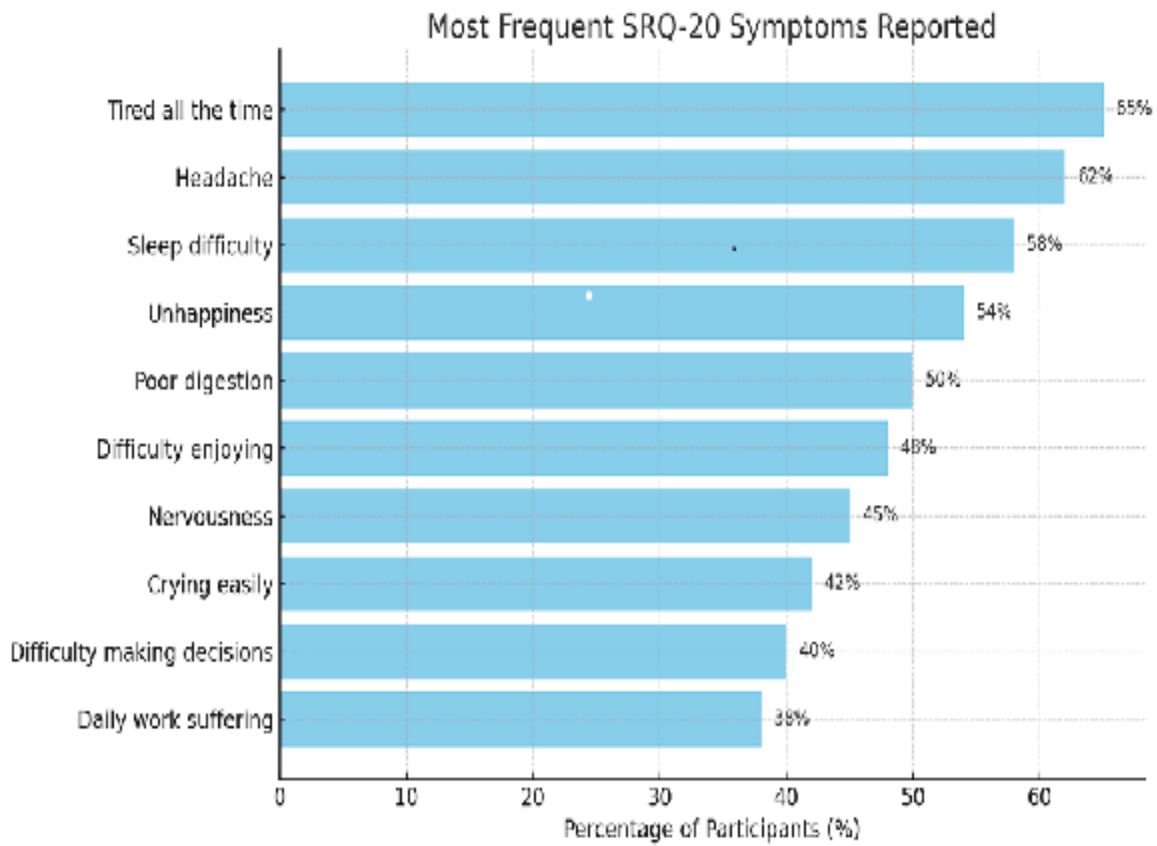
Variable	Categories	Frequency	Percent
Difficult to enjoy	No	473	85.5
	Yes	87	14.5
	Total	560	100
Difficult in decision making	No	456	81.4
	Yes	104	18.6
	Total	560	99.8
Daily work suffering	No	344	61.4
	Yes	216	38.6
	Total	560	100
Unable to play a useful part in life	No	466	83.2
	Yes	94	16.8
	Total	560	100
Lost interest in things	No	414	73.9
	Yes	146	26.1
	Total	560	99.8
Feel worthless person	No	483	86.2
	Yes	77	13.8
	Total	560	100
Thought of ending life	No	456	81.4
	Yes	104	18.6
	Total	560	100
Feel tired all the time	No	427	76.2
	Yes	133	23.8
	Total	560	100
Uncomfortable feeling in the stomach	No	436	78.9
	Yes	124	21.1
	Total	560	100
Easily tired	No	372	66.4
	Yes	188	33.6

Distribution of SRQ Symptoms among Study Participants

The Self-Reporting Questionnaire (SRQ-20) was used to assess symptoms of common mental disorders among the 560 study participants. The most frequently reported symptom was feeling easily tired, noted by (33.6% n = 188) of participants. Headache and daily work suffering were both reported by (38.6% n = 215 and n = 216, respectively), followed by feelings of unhappiness (31.1%, n = 174) and loss of interest in things (26.1%, n = 146). Persistent tiredness was reported by (23.8% n = 133), while (21.1% n = 124) reported discomfort in the stomach. Symptoms such as poor appetite (18.7%, n = 105), difficulty in decision-making (18.6%, n = 104), and thoughts of ending life (18.6%, n = 104) were also notable. Additionally, (17.5% n = 98) of participants reported feeling nervous or tense, as well as experiencing poor digestion. Other symptoms included crying (17.3%, n = 97), feeling unable to sleep or oversleeping (16.4%, n = 90), feeling easily frightened (15.5%, n = 87), and trouble in thinking (15.5%, n = 87). A total of (14.5%, n = 87) reported difficulty enjoying daily activities, and (16.8% n = 94) felt unable to play a useful part in life. Less frequently reported symptoms included feeling like a worthless person (13.8%, n = 77), involuntary hand shaking (13.2%, n = 74), and feelings of worthlessness or inadequacy. Most respondents denied experiencing severe symptoms such as suicidal ideation or loss of functional ability, though these symptoms were still present in a significant minority.

Overall, the SRQ responses indicated that a considerable proportion of participants experienced symptoms suggestive of psychological distress, warranting further assessment and possible intervention.

Figure 3: Distribution of SRQ Symptoms among Study Participants



Bivariable Analysis of Factors Associated with Common Mental Disorders

A bivariable logistic regression analysis was conducted to identify factors associated with common mental disorders (CMDs) among health facility patients in Bishoftu. Of the 560 participants, 226 (40.4%) were found to have CMDs.

Socio-demographic factors: The prevalence of CMDs was slightly higher among females (40.9%) than males (39%), but this difference was not statistically significant (COR = 1.081, 95% CI: 0.770–1.517, $p = 0.653$). Participants aged 35–44 years had significantly higher odds of CMDs compared to those aged 15–24 (COR = 0.352, 95% CI: 0.169–0.734, $p = 0.005$). No statistically significant associations were found with marital status, religion, or place of residence ($p > 0.05$). Regarding occupation, being a merchant was significantly associated with increased odds of CMDs compared to farmers (COR = 2.034, 95% CI: 1.039–3.981, $p = 0.038$). Monthly income was also a significant factor: participants earning between 1001–2500 ETB had lower odds of CMDs compared to those earning ≤ 1000 ETB (COR = 0.590, 95% CI: 0.366–0.954, $p = 0.031$). Educational status was not significantly associated with CMDs.

Clinical and behavioral factors: Participants with diabetes or hypertension were significantly more likely to have CMDs than those without chronic illnesses (COR = 2.645, 95% CI: 1.522–4.595, $p = 0.001$ for both conditions). Cardiac illness also showed a trend toward significance (COR = 1.751, 95% CI: 0.929–3.301, $p = 0.083$). There was no significant association between CMDs and asthma, arthritis, or other chronic diseases and non-chronic.

Current alcohol use was significantly associated with CMDs (COR = 0.611, 95% CI: 0.393–0.951, $p = 0.028$), indicating lower odds of CMDs among non-users. No significant association was found with cannabis use, cigarette smoking, or khat use.

Psychosocial factors: Social support showed a strong and statistically significant association with CMDs. Participants with poor social support had markedly higher odds of CMDs compared to those with strong support (COR = 15.918, 95% CI: 9.183–27.591, $p < 0.001$). Moderate social support also increased the odds (COR = 2.730, 95% CI: 1.505–4.949, $p < 0.001$).

Variables with p -values less than 0.25 in the bivariable analysis—including age, occupation, income, chronic illness, alcohol use, and social support—were selected for multivariable logistic regression analysis. (see **Table 4**).

Table 4.Bivariable and multi variable Prevalence of common mental disorders and associated factor among health facilities patients Bishoftu Ethiopia (n=560)

Variable	Categories	CMD		COR (95% CI)	P value	AOR 95% CI	P-value
		Yes	No				
Sex	Male	103(39%)	161(61%)	1			
	Female	121 (40.9%)	175 (59.1%)	1.081 (.770 -1.517)	.653		
Age	15-24	77 (44.7%)	95 (55.3%)	1		1.167(.351-3.884)	.801
	25-34	38 (26.0%)	108 (74.0%)	.811 (.401- 1.638)	.558	.702(.245-2.009)	.509
	35-44	66 (41.5%)	93(58.5%)	.352 (.169- .734)	.005*	2.300(.822-6.432)	.112
	45-54	24 (53.3%)	21(46.7%)	.710 (.349 -1.443)	.344	1.481(.458-4.793)	.512
	≥55	19 (50%)	19 (50%)	1.143 (.481 - 2.713)	.762	1	
Marital status	Single	106 (40.3%)	157 (59.7%)	1			
	Married	93 (38.6%)	148 (61.4%)	.931 (.651-1.331)	.694		
	Divorced	16 (43.2%)	21 (56.8%)	1.128 (.563 -)2.262	.733		
	Widow	9 (47.4%)	10 (52.6%)	1.333 (.524 -3.391)	.546		
Religion	Orthodox	112 (40.1%)	167 (59.9%)	1		.694(.132-3.694)	.666
	Protestants	66 (38.2%)	107 (61.8%)	.9209(.623 -1.357)	.673	.701(.132-3.729)	.677
	Muslims	40 (40.8%)	58 (59.2%)	1.028 (.644 -1.643)	.907	.734(.133-4.064)	.723
	Others	6 (60.0%)	4 (40.0%)	2.237 (.617 - 8.106)	.220*	1	

Variable	categories	CMD		COR 95% CI	P value	AOR 95% CI	P –Value
		Yes	No				
Occupation	Farmer	34 (37%)	58 (63%)	1		.492(.073-3.295)	.464
	Governmental worker	16 (30.8%)	36 (69.2%)	.758 (.367 -1.566)	.454	.251(.036-1.756)	.164
	Daily laborer	17 (28.3%)	43 (71.7%)	.674 (.334 -1.362)	.272	.327(.042-2.532)	.284
	Merchant	31 (54.4%)	26 (45.6%)	2.034 (1.039 - 3.981)	.038*	.417(.059-2.945)	.381
	House wife	25 (41%)	36 (59%)	1.185 (.610 -2.299)	.616	.424(.056-3.188)	.404
	Unemployed	24 (36.4%)	42 (63.6%)	.975 (.506 -1.879)	.939	.251(.032-1.982)	.190
	Student	71(43.6%)	92 (56.4%)	1.316 (.779 -2.224)	.304	.347(.044-2.726)	.314
	Retired	6 (66.7%)	3 (33.3%)	3.412 (.801 -14.532)	.097*	1	
Educational status	Unable to read	16 (34.8%)	30 (63.2%)	1			
	Primary school(1-8)	61 (39.6%)	93 (60.4%)	1.230 (.619 -2.445)	.555		
	Secondary school(9 12)	100 (39.7%)	152 (60.3%)	1.234 (.639 -2.380)	.531		
	Diploma and above	47 (43.5%)	61 (56.5%)	1.445 (.706 -2.957)	.314		
Monthly income	≤ 1000	119(41.2%)	170 (58.8%)	1		2.645(.236-3.779)	.041*
	1001-2500	31 (29.2%)	75 (70.8%)	.590 (.366 -.954)	.031*	.365(.133-.998)	.050
	2501-5000	39 (42.9%)	52 (57.1%)	1.071 (.665 -1.726)	.777	1.061(.446-2.528)	.893
	≥ 5000	35 (47.3%)	39 (52.7%)	1.282 (.768 -2.141)	.342	1	
Residence	Urban	170 (41.9%)	236 (58.1%)	1		.853(.503-1.446)	.555
	Rural	54 (35.1%)	100 (64.9%)	.750 (.510 -1.102)	.143*	1	

Variable	Categories	CMD		COR 95% CI	P value	AOR, 95% CI	P- Value
		Yes	No				
Chronic illness and other non chronic illness	Non chronic illness	35(29.4%)	84(70.6%)	1		1	
	diabetics	53(51.5%)	50(48.5%)	2.645 (1.522 -4.595)	.001*	3.219(1.595-8.029)	.001*
	hypertension	53(51.5%)	50(48.5%)	2.645 (1.522-4.595)	.001*	3.219(1.595-8.029)	.001*
	cardiac illness	27(42.2%)	37(57.8%)	1.751(.929 -3.301)	.083*	2.524(1.163-5.477)	.019*
	asthma	24(37.5%)	40 (62.5%)	1.440(.758 -2.735)	.265	.979(.455-2.104)	.956
	arthritis	20(35.0%)	37(65%)	1.297(.663 -2.540)	.448	1.071(.473-2.426)	.869
	Other chronic disease	11(22.0%)	39(78.0%)	.758(.355 -1.620)	.474	.724(.292-1.795)	.486
Family history of mental illness	Yes	36 (34.3%)	69 (65.7%)	1		.838(.464-1.514)	.558
	No	188 (41.3%)	267 (58.7%)	.741 (.475 -1.155)	.186*	1	
Cannabis use	Yes	6 (27.3%)	10 (72.7%)	1			
	No	218 (40.1%)	326 (59.9%)	.897 (.321 -2.505)	.836		
Current alcohol use	Yes	48 (50.0%)	48 (50.0%)	1		1.407(.782-2.532)	.254
	No	176 (38.3%)	283 (61.7%)	.611 (.393 -.951)	.028*	1	
Current cigarette use	Yes	30 (39.5%)	46 (60.5%)	1			
	No	194 (40.1%)	290 (59.9%)	.975 (.595 -1.599)	.920		
Current khat use	Yes	44 (41.9%)	61 (58.1%)	1			
	No	180 (39.6%)	275 (60.4%)	1.102 (.716 -1.695)	.659		
Social support networking	Strong	43 (27.0%)	116 (73.0%)	1		1	
	Poor	165 (68.8%)	75 (31.2%)	15.918 (9.183 -27.591)	< 0.001*	21.980(11.590-41.685)	< 0.001**
	Moderate	145 (90.0%)	16 (10 %)	2.730 (1.505 - 4.949)	< 0.001*	3.41591.792-6.507)	< 0.001**

COR- crud odd ratio, variable statistically significant, p value < 0.25 AOR adjusted odd ratio statistically significantly p value < 0.05

Multivariable Analysis of Factors Associated with Common Mental Disorders

A multivariable logistic regression analysis was conducted to identify factors independently associated with common mental disorders (CMDs) among 560 patients attending public health facilities in Bishoftu.

Socio-demographic Factors

Age, religion, and occupation were not significantly associated with CMDs. For example, individuals aged 15–24 years had an adjusted odds ratio (AOR) of 1.167 (95% CI: 0.351–3.884), and those aged 35–44 had an AOR of 2.300 (95% CI: 0.822–6.432), both of which were not statistically significant ($p > 0.05$). Residence (urban vs. rural) also did not show a significant association (AOR = 0.853, 95% CI: 0.503–1.446, $p = 0.555$). Monthly income was significantly associated with CMDs: Participants earning monthly income ≤ 1000 ETB had 2.6 times higher odds of CMDs compared to those earning ≥ 5000 ETB (AOR = 2.645, 95% CI: 1.236–3.779, $p = 0.041$). Those earning 1001–2500 ETB had lower odds of CMDs (AOR = 0.365, 95% CI: 0.133–0.998, $p = 0.050$). No significant difference was observed for the 2501–5000 ETB category ($p = 0.893$).

Chronic Medical Illness

Chronic illnesses showed strong associations with CMDs: participants with Diabetes AOR = 3.219 (95% CI: 1.595–8.029), $p = 0.001$, Hypertension AOR = 3.219 (95% CI: 1.595–8.029), $p = 0.001$ were 2.219 times more likely to develop CMD and Cardiac illness: AOR = 2.524 (95% CI: 1.163–5.477), $p = 0.019$ were 1.524 times more likely to develop CMDs. Other conditions such as asthma, arthritis, and other chronic illnesses were not significantly associated with CMDs ($p > 0.05$). Neither family history of mental illness (AOR = 0.838, 95% CI: 0.464–1.514, $p = 0.558$) nor current alcohol use (AOR = 1.407, 95% CI: 0.782–2.532, $p = 0.254$) showed a statistically significant association with CMDs.

Social Support

Social support was a strong and significant predictor of CMDs: Participants with poor social support had nearly 22 times higher odds of CMDs compared to those with strong support (AOR = 21.980, 95% CI: 11.590–41.685, $p < 0.001$). Those with moderate social support also had significantly higher odds (AOR=3.415, 95%CI: 1.792–6.507, ($p < 0.05$))

6. DISCUSSION

The prevalence of CMD and its association with other variables were evaluated in this investigation. The study revealed that a significant proportion (40.4%) of patients attending public health facilities in Bishoftu exhibited symptoms of CMDs. This estimate, with a 95% confidence interval (35.7–45.0%), is relatively high.

Although the same screening tool (SRQ-20) and cutoff point (≥ 7) were used, the prevalence reported in our study is higher than that in Malawi(45) Saudi Arabia, (46), Attenders in Vellore, South India(47), Sebeta primary care (48), Harari among HIV follow up patients(35) and Jimma medical center(37). This variation might be attributed to differences in sample size demographic and clinical setting. In Addis Ababa, a study among glaucoma patients reported a low prevalence rate(49), though it employed a higher cutoff point (≥ 11), which may explain the lower estimate (50). A 2019 study in Sri Lanka also reported a higher prevalence using a cutoff point of ≥ 5 (51), supporting the notion that lower cutoff thresholds elevate CMD detection rates. Similarly, a study at the Black Lion Cancer Clinic using SRQ-20 with a cutoff above 8 found a higher prevalence, likely due to the psychological burden of cancer (36). In contrast, studies from Gonder Comprehensive and FelegeHiwot referral hospitals, which used the same tool but a different cutoff point (≥ 8), reported similar prevalence to ours

(52). An outpatient-based Ethiopian study using SRQ-20 with a cutoff ≥ 8 and a smaller sample also found comparable results(33), possibly reflecting cultural variations. Sex was not significantly associated with CMDs in this study, which contrasts with findings from earlier Ethiopian research (33). This could be due to the predominantly younger age group (15–24 years), who may experience less gender-based psychological stress.

Age was similarly not a significant factor in this study, diverging from institutional surveys that found older age to be associated with CMDs(21). In previous institutional surveys involving a representative sample from all Ethiopian regions participants, older age was linked to CMDs (33).

This difference may again stem from the sample's youthfulness; the few participants over 55 likely limited statistical power. However, CMD symptoms were more common in those aged 15–24 than in the 35–45 group, indicating a need for targeted mental health interventions while illiteracy was associated with CMDs in the IlluAbabore study(53), this was not observed here, likely because most participants had completed at least secondary school. Likewise, unemployment, a significant factor in studies from Addis Ababa (21), was not a strong predictor in our population, possibly due to the youthful demographic.

Marital status, particularly being single, did not increase CMD risk in our study, unlike a study in Sebeta where it was linked to depression. This may be attributed to the age of our participants, who are less likely to be married. Similarly, family history of mental illness showed no significant association with CMDs, in contrast to findings from Harari(11), warranting further study alcohol and khat use were not significantly associated with CMDs, differing from studies such as Sebeta's, where alcohol was a predictor of depression (48) These discrepancies may be due to lower substance use rates among our younger sample or its potential use as a coping strategy.

Monthly income below 1000 birr was strongly associated with CMDs, consistent with results from a cancer clinic study at Black Lion Hospital(36). However, it is challenging to compare income-based findings across studies given inflation and differing cost-of-living contexts (54).

Participants with diabetes mellitus were 2.219 times more likely to develop CMDs compared to those without chronic illness. This aligns with findings from CKD patients in Amhara and outpatient medical patients in Ethiopia (55,56). Biological mechanisms such as hyperglycemia, hormonal imbalances, and oxidative stress have been implicated in the development of CMDs(57). Moreover, fasting blood glucose levels have been independently linked to anxiety(33).

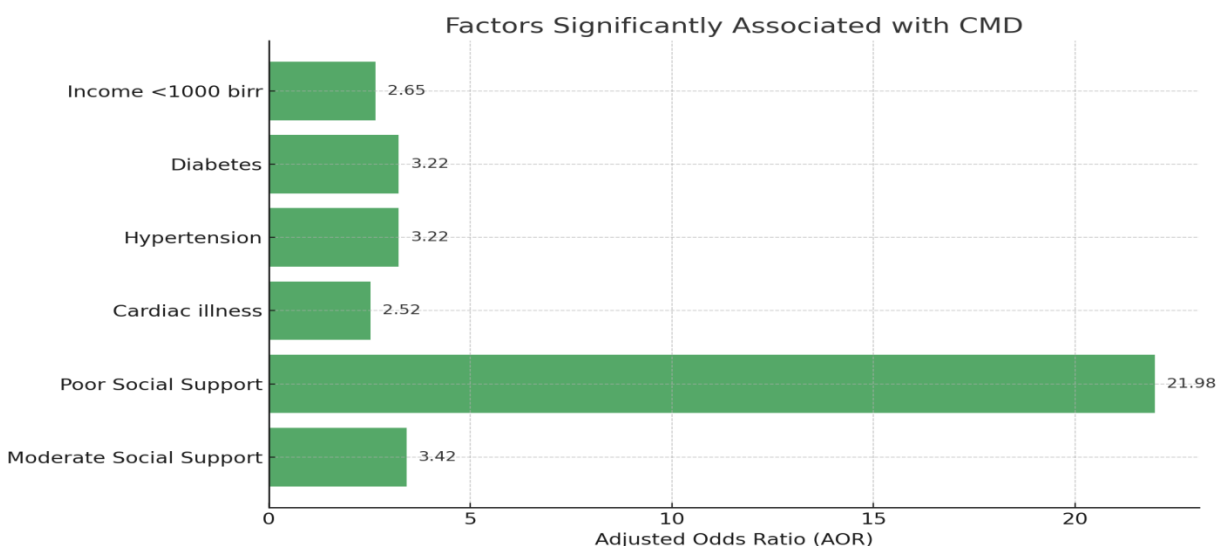
Hypertensive patients were also 2.219 times more likely to experience CMDs, supported by studies on chronic disease patients(58). Chronic illness can impair daily functioning and quality of life, leading to emotional distress (55). Additionally, hypertension may contribute to CMDs via mechanisms such as reduced cerebral perfusion, micro-vascular damage, and neurotransmitter disruptions (59).

Cardiac illness was another independent predictor of CMDs, consistent with systematic reviews on ischemic heart disease (60) and studies of heart failure patients (61). Reduced cerebral blood flow due to cardiovascular inefficiency may impair brain function, causing lightheadedness and cognitive symptoms (62).

Poor social support was one of the strongest predictors of CMDs in our study, echoing findings from Addis Ababa, Amhara, and China (63). Lack of support can diminish quality of life, hinder treatment adherence, and exacerbate mental distress (64). It may also alter hypothalamic-pituitary-adrenal system function, increasing vulnerability to stress (65).

Poor support can intensify negative emotions and further precipitate CMDs (66). Conversely, strong social support enhances resilience and emotional stability by fostering self-efficacy and reducing feelings of isolation (67).

Moderate social support also raised the likelihood of CMDs (AOR = 3.415), supporting the theory that individuals with only partial support may feel inadequate or envious compared to peers with stronger networks, contributing to psychological distress.



The observed graded effect highlights that not only the absence of support but even moderate insufficiency in support can have a substantial mental health impact. This underscores the importance of early identification of individuals with reduced social support and calls for integration of psychosocial assessment tools in routine clinical care. Strengthening family, peer, and community support systems should be considered a key strategy in preventing and mitigating CMDs in the primary care setting.

Overall the findings showed that CMDs are significantly associated with socioeconomic hardship (low income), clinical vulnerability (presence of chronic illnesses), and psychosocial stressors (low or moderate social support). This highlights the necessity of adopting a bio-psychosocial approach in primary healthcare settings, wherein medical, psychological, and social dimensions are addressed in an integrated manner.

7. CONCLUSION and RECOMMENDATION

7.1. Conclusion

The finding of this study showed that prevalence of common mental disorders was high in the public health facility attendees Bishoftu, Ethiopia. Monthly income, among chronic diseases diabetes and hypertension, cardiac illness and poor social support and moderate social support weresignificantly associated with common mental disorders. Focusing these identified associated factors, and other determinants screening, early identification, and development of a program to prevent and provide appropriate institutional and communitybased interventions for common mental disorder should be taken attention by all stakeholders.

7.2. Recommendation

Based on the findings of this study, the following recommendations are proposed:

1. Integrate Mental Health Services: Mental health screening tools such as the SRQ-20 should be routinely incorporated into primary healthcare services, particularly for patients with chronic illnesses.
2. Strengthen Social Support: Community health programs should focus on enhancing social support systems, targeting individuals with limited or moderate social support networks.
3. Capacity Building: Healthcare professionals at primary care levels should receive training in the early identification and basic management of CMDs to ensure timely intervention.
4. Targeted Interventions for Chronic Illness Patients: Mental health support services should be included in the routine care of patients with chronic physical health conditions, such as hypertension, diabetes, and, cardiac disease diabetes,
5. Policy and Resource Allocation: Local and regional health authorities should allocate adequate resources and integrate mental health services into existing healthcare programs to improve mental health outcomes.

7.3. Limitation of the study

There have some limitations on this study. The cross-sectional study design makes it unfeasible to ascertain the causal association. Furthermore, the measurement used to diagnose common mental disorders was self-reported, which is subjected to recall and reporting bias. Lastly, the SRQ-20 is a screening tool rather than a mental health diagnosis tool.

8. REFERENCE

1. Mehreen Riaz Faisal 1 , Fakiha Tus Salam 2 , Aishwarya Lakshmi Vidyasagaran 3 , Claire Carswell 3 , Mohammad Wali Naseri 4 , Zalmi Shinwari 5 , Helen Fulbright 6 , Gerardo A Zavala 3 , Simon Gilbody 7 , Najma Siddiqi. Collaborative care for common mental disorders in low- and middle-income countries: A systematic review and meta-analysis. *Epub*. 2024 Jul 20;363:595-608.:595-608.
2. Legas G, Beyene GM, Asnakew S, Belete A, Shumet S, Selomon Tibebe N, et al. Magnitude and predictors of common mental disorders among residents in south Gondar Zone, Northwest Ethiopia: a community-based, cross-sectional study. *BMC Psychiatry*. 2022 Dec;22(1):322.
3. Kupferberg A, Hasler G. The social cost of depression: Investigating the impact of impaired social emotion regulation, social cognition, and interpersonal behavior on social functioning. *J Affect Disord Rep*. 2023 Dec;14:100631.
4. Kroenke K, Spitzer RL, Williams JBW, Monahan PO, Löwe B. Anxiety Disorders in Primary Care: Prevalence, Impairment, Comorbidity, and Detection. *Ann Intern Med*. 2007 Mar 6;146(5):317–25.
5. O’Neil A, Jacka FN, Quirk SE, Cocker F, Taylor CB, Oldenburg B, et al. A shared framework for the common mental disorders and Non-Communicable Disease: key considerations for disease prevention and control. *BMC Psychiatry*. 2015 Dec;15(1):15.
6. WHO. The World Health Report 2001: Mental Disorders affect one in four people. 2001;
7. Chopra P. Mental health and the workplace: issues for developing countries. *Int J Ment Health Syst*. 2009;3(1):4.
8. Global, regional, and national burden of 12 mental disorders in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet Psychiatry*. 2022 Feb;9(2):137–50.
9. Lele U, Ridker R, Upadhyay J. Health System Capacities in Developing Countries and Global Health Initiatives On Communicable Diseases. 2005 Jan 1;
10. Kassa GM, Abajobir AA. Prevalence of common mental illnesses in Ethiopia: A systematic review and meta-analysis. *Neurol Psychiatry Brain Res*. 2018 Dec;30:74–85.
11. Abdeta T, Birhanu A, Kibret H, Alemu A, Bayu K, Bogale K, et al. Prevalence of common mental disorders and associated factors among adults living in Harari regional state, eastern Ethiopia: a community based cross-sectional study. *Front Psychiatry*. 2023 Jul 13;14:1183797.
12. Assefa H, Ali T, Mussa I, Misgana T, Abdi D, Zewudie A, et al. Common mental disorders and associated factors among adult patients admitted in non-psychiatric wards of public hospitals in Harari regional State, Eastern Ethiopia. *BMC Psychiatry*. 2025 Jan 17;25(1):47.

13. Patel V, Chisholm D, Parikh R, Charlson FJ, Degenhardt L, Dua T, et al. Addressing the burden of mental, neurological, and substance use disorders: key messages from Disease Control Priorities, 3rd edition. *The Lancet*. 2016 Apr;387(10028):1672–85.
14. Thoits PA. Mechanisms Linking Social Ties and Support to Physical and Mental Health. *J Health Soc Behav*. 2011 Jun;52(2):145–61.
15. Scott KM, Lim C, Al-Hamzawi A, Alonso J, Bruffaerts R, Caldas-de-Almeida JM, et al. Association of Mental Disorders With Subsequent Chronic Physical Conditions: World Mental Health Surveys From 17 Countries. *JAMA Psychiatry*. 2016 Feb 1;73(2):150.
16. bishoftu adm. Bishoftu (Debre Zeit): A Glimpse into the City of Seven Lakes. *Ethio all .com*.
17. Gebreegziabher EA, Astawesegn FH, Anjulo AA, Kerie MW. Urban Health Extension Services Utilization in Bishoftu Town, Oromia Regional State, Central Ethiopia. . *BMC Health Serv Res*. 2017 Dec;17(1):195.
18. Kuddus MA, Tynan E, McBryde E. Urbanization: a problem for the rich and the poor? *Public Health Rev*. public health rev *Health Serv Res*. 2020 Dec;41(1):1.
19. Iraragorri N, Spackman E. Assessing the value of screening tools: reviewing the challenges and opportunities of cost-effectiveness analysis. *Public Health Rev*. 2018 Dec;39(1):17.
20. Barsisa B, Derajew H, Haile K, Mesafint G, Shumet S. Prevalence of common mental disorder and associated factors among mothers of under five year children at Arbaminch Town, South Ethiopia, 2019. Zhu R, editor. *PLOS ONE*. 2021 Sep 30;16(9):e0257973.
21. Habtamu Y, Admasu K, Tullu M, Kebede A. Magnitude of common mental disorders and factors associated among people living in Addis Ababa Ethiopia 2018: community based cross-sectional study. *BMC Psychiatry*. 2022 Dec;22(1):160.
22. Sadeghi AR, Baghi ESMS, Shams F, Jangjoo S. Women in a safe and healthy urban environment: environmental top priorities for the women’s presence in urban public spaces. *BMC Womens Health*. 2023 Apr 6;23(1):163.
23. Kuddus MA, Tynan E, McBryde E. Urbanization: a problem for the rich and the poor? *Public Health Rev*. 2020 Dec;41(1):1.
24. Risal A. Common Mental Disorders. *Kathmandu Univ Med J*. 2012 Jun 13;9(3):213–7.
25. Institutional_Review_Board_College_of_Health_Science, Fenta, Yideg, Negash A, Dirirsa, Berhanu B, et al. _Addis_Ababa_Univ_UPJXVj6.pdf. *Front Psychiatry* [Internet]. 2023 Jul 13 [cited 2025 Jun 5];14. Available from: <https://www.frontiersin.org/articles/10.3389/fpsy.2023.1183797/full>
26. Ferrari AJ, Santomauro DF, Aali A, Abate YH, Abbafati C, Abbastabar H, et al. Global incidence, prevalence, years lived with disability (YLDs), disability-adjusted life-years (DALYs), and healthy life

expectancy (HALE) for 371 diseases and injuries in 204 countries and territories and 811 subnational locations, 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021. *The Lancet*. 2024 May;403(10440):2133–61.

27. Walker ER, McGee RE, Druss BG. Mortality in Mental Disorders and Global Disease Burden Implications: A Systematic Review and Meta-analysis. *JAMA Psychiatry*. 2015 Apr 1;72(4):334.

28. Wang M, Ropponen A, Narusyte J, Helgadóttir B, Bergström G, Blom V, et al. Adverse outcomes of chronic widespread pain and common mental disorders in individuals with sickness absence – a prospective study of Swedish twins. *BMC Public Health*. 2020 Dec;20(1):1301.

29. Sriram S. Poverty and common mental disorders in India: the inseparable twins. *Int J Community Med Public Health*. 2018 Sep 24;5(10):4629.

30. Muze M, Denur M, Hussein M, Muzemil M, Yesse M, Kedir S. Prevalence and Associated Factors of Common Mental Disorders Among Adult Residents in Silte Zone, Southern Ethiopia. *Clin Pract Epidemiol Ment Health*. 2021 Oct 15;17(1):128–35.

31. Lund C, Brooke-Sumner C, Baingana F, Baron EC, Breuer E, Chandra P, et al. Social determinants of mental disorders and the Sustainable Development Goals: a systematic review of reviews. *Lancet Psychiatry*. 2018 Apr;5(4):357-69.

32. Duko B, Belayhun Y, Bedaso A. Prevalence of common mental disorder and its association with perceived stigma and social support among people living with HIV/AIDS in Ethiopia: a systematic review and meta-analysis. *Int J Ment Health Syst*. 2024 Jul 8;18(1):25.

33. Denur M, Tesfaw G, Yohannis Z. The magnitude and correlates of common mental disorder among outpatient medical patients in Ethiopia: an institution based cross-sectional study. *BMC Res Notes*. 2019 Dec;12(1):360.

34. Kerebih H, Soboka M. Prevalence of Common Mental Disorders and Associated Factors among Residents of Jimma Town, South West Ethiopia. *J Psychiatry [Internet]*. 2016 [cited 2025 Jun 6];19(4). Available from: <https://www.omicsonline.com/open-access/prevalence-of-common-mental-disorders-and-associated-factors-among-residents-of-jimma-town-south-west-ethiopia-2378-5756-1000373.php?aid=74728>

35. Motumma A, Negesa L, Hunduma G, Abdeta T. Prevalence and associated factors of common mental disorders among adult patients attending HIV follow up service in Harar town, Eastern Ethiopia: a cross-sectional study. *BMC Psychol*. 2019 Dec;7(1):11.

36. Feyera F, Endeshaw M, Kebede Y, Tirfessa K, Bekele SB. The Magnitude of Common Mental Disorders and Associated Factors Among Cancer Patients at Black Lion Specialized Hospital, Addis Ababa, Ethiopia: Cross- Sectional Study. *Cancer Control*. 2022 Nov;29:10732748221127156.

37. Megersa D. Prevalence and associated factors of anxiety among patients with chronic non-communicable diseases on follow up at jimma medical center, jimma, southwest Ethiopia. 2020;
38. Basha EA, Mengistu BT, Engidaw NA, Wubetu AD, Haile AB. Suicidal Ideation and Its Associated Factors Among Patients with Major Depressive Disorder at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia. *Neuropsychiatr Dis Treat*. 2021 May;Volume 17:1571–7.
39. Kassew T, Abebe G, Adane A, Aychiluhm SB, Shumet S. Common mental disorder and its associated factors among epileptic patients at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia. 2020;20:(267).
40. Gebreegziabher EA, Astawesegn FH, Anjulo AA, Kerie MW. Urban Health Extension Services Utilization in Bishoftu Town, Oromia Regional State, Central Ethiopia. *BMC Health Serv Res*. 2017 Dec;17(1):195.
41. Charlson F, Chang O, Kubuabola I, Schess J, Latu C, Hunter E, et al. Implementation of the mental health Gap Action Programme (mhGAP) within the Fijian Healthcare System: a mixed-methods evaluation. *Int J Ment Health Syst*. 2019 Dec;13(1):43.
42. Abdeta T, Birhanu A, Kibret H, Alemu A, Bayu K, Bogale K, et al. Prevalence of common mental disorders and associated factors among adults living in Harari regional state, eastern Ethiopia: a community based cross-sectional study. *Front Psychiatry*. 2023 Jul 13;14:1183797.
43. Gebreegziabher EA, Astawesegn FH, Anjulo AA, Kerie MW. Urban Health Extension Services Utilization in Bishoftu Town, Oromia Regional State, Central Ethiopia. *BMC Health Serv Res*. 2017 Dec;17(1):195.
44. Institutional_Review_Board_College_of_Health_Science. institutional review board guideline. 2022.
45. Udedi M, Swartz L, Stewart RC, Kauye F. Health service utilization by patients with common mental disorder identified by the Self-Reporting Questionnaire in a primary care setting in Zomba, Malawi: A descriptive study. *Int J Soc Psychiatry*. 2014 Aug;60(5):454–61.
46. Alghadeer SM, Alhossan AM, Al-Arifi MN, Alrabiah ZS, Ali SW, Babelghaith SD, et al. Prevalence of mental disorders among patients attending primary health care centers in the capital of Saudi Arabia. *Neurosciences*. 2018 Jul;23(3):238–43.
47. Pothan M, Kuruvilla A, Philip K, Joseph A, Jacob KS. Common Mental Disorders Among Primary Care Attenders in Vellore, South India: Nature, Prevalence and Risk Factors. *Int J Soc Psychiatry*. 2003 Jun 1;49(2):119–25.
48. Haile K, Sahile AT. Depressive symptoms in primary health care attendees in Sebeta Town, Ethiopia: Prevalence, associated factors, and detection by health workers. *Sci Prog*. 2021 Jul;104(3):003685042110343.

49. Bedasso K, Bedaso A, Feyera F, Gebeyehu A, Yohannis Z. Prevalence of Common Mental Disorders and Associated Factors among People with Glaucoma Attending Outpatient Clinic at Menelik II Referral Hospital, Addis Ababa, Ethiopia. *Bhattacharya S, editor. PLOS ONE.* 2016 Sep 1;11(9):e0161442.
50. Bedasso K, Bedaso A, Feyera F, Gebeyehu A, Yohannis Z. Prevalence of Common Mental Disorders and Associated Factors among People with Glaucoma Attending Outpatient Clinic at Menelik II Referral Hospital, Addis Ababa, Ethiopia. *Bhattacharya S, editor. PLOS ONE.* 2016 Sep 1;11(9):e0161442.
51. Doherty S, Hulland E, Lopes-Cardozo B, Kirupakaran S, Surenthirakumaran R, Cookson S, et al. Prevalence of mental disorders and epidemiological associations in post-conflict primary care attendees: a cross-sectional study in the Northern Province of Sri Lanka. *BMC Psychiatry.* 2019 Dec;19(1):83.
52. Tilahun MM, Yibekal BT, Kerebih H, Ayele FA. Prevalence of common mental disorders and associated factors among adults with Glaucoma attending University of Gondar comprehensive specialized hospital tertiary eye care and training center, Northwest, Ethiopia 2020. *Tesfaye M, editor. PLOS ONE.* 2021 May 20;16(5):e0252064.
53. Engidaw NA, Abdu Z, Chinani I. Prevalence and associated factors of common mental disorders among residents of Illu Ababore zone, southwest Ethiopia: a cross-sectional study. *Int J Ment Health Syst.* 2020 Dec;14(1):64.
54. Lund C, Breen A, Flisher AJ, Kakuma R, Corrigall J, Joska JA, et al. Poverty and common mental disorders in low and middle income countries: A systematic review. *Soc Sci Med.* 2010 Aug;71(3):517–28.
55. Gela YY, Tesfaye W, Melese M, Getnet M, Ambelu A, Eshetu HB, et al. Common mental disorders and associated factors among adult chronic kidney disease patients attending referral hospitals in Amhara Regional State. *Sci Rep.* 2024 Mar 21;14(1):6812.
56. Denur M, Tesfaw G, Yohannis Z. The magnitude and correlates of common mental disorder among outpatient medical patients in Ethiopia: an institution based cross-sectional study. *BMC Res Notes.* 2019 Dec;12(1):360.
57. Balhara YP. Diabetes and psychiatric disorders. *Indian J Endocrinol Metab.* 2011;15(4):274.
58. M. S, S. M, Vadakkiniath IJ, A. G. Prevalence and correlates of stress, anxiety, and depression in patients with chronic diseases: a cross-sectional study. *Middle East Curr Psychiatry.* 2023 Aug 16;30(1):66.
59. Chaddha A, Robinson EA, Kline-Rogers E, Alexandris-Souphis T, Rubenfire M. Mental Health and Cardiovascular Disease. *Am J Med.* 2016 Nov;129(11):1145–8.
60. Derisi MM, Nasiri MJ, Aryan A, Moosavi Jarrahi A, Amiri P, Mohseny M. Prevalence of psychiatric disorders in patients with ischemic heart disease: A systematic review and meta-analysis. *J Res Med Sci.* 2022 Jan;27(1):12.

61. Tsabedze N, Kinsey JLH, Mpanya D, Mogashoa V, Klug E, Manga P. The prevalence of depression, stress and anxiety symptoms in patients with chronic heart failure. *Int J Ment Health Syst.* 2021 Dec;15(1):44.
62. Shen Q, Song H, Aspelund T, Yu J, Lu D, Jakobsdóttir J, et al. Cardiovascular disease and subsequent risk of psychiatric disorders: a nationwide sibling-controlled study. *eLife.* 2022 Oct 21;11:e80143.
63. Qi M, Zhou SJ, Guo ZC, Zhang LG, Min HJ, Li XM, et al. The Effect of Social Support on Mental Health in Chinese Adolescents During the Outbreak of COVID-19. *J Adolesc Health.* 2020 Oct;67(4):514–8.
64. Ok E. Assessment of the mental status of chronic kidney patients. *J Psychiatr Nurs* [Internet]. 2019 [cited 2024 Sep 18]; Available from: https://www.journalagent.com/phd/pdfs/PHD-35119-RESEARCH_ARTICLE-OK.pdf
65. Melkam M, Nenko G, Demilew D. Common mental disorders and associated factors among high school students in Debre Markos Town, Northwest Ethiopia: an institutional-based cross-sectional study. *BMJ Open.* 2022 Nov;12(11):e059894.
66. Assefa B, Duko B, Ayano G. Prevalence and Factors Associated with Depressive Symptoms among Patient with Chronic Kidney Disease (CKD) in Black Lion Specialized Hospital and Saint Paulo’s Hospital Millennium Medical College, Addis Ababa, Ethiopia: Cross Sectional Study. *J Psychiatry* [Internet]. 2016 [cited 2024 Sep 18];19(6). Available from: <https://www.omicsonline.com/open-access/prevalence-and-factors-associated-with-depressive-symptoms-among-patientwith-chronic-kidney-disease-ckd-in-black-lion-specialized-2378-5756-1000390.php?aid=82076>
67. Qi M, Zhou SJ, Guo ZC, Zhang LG, Min HJ, Li XM, et al. The Effect of Social Support on Mental Health in Chinese Adolescents During the Outbreak of COVID-19. *J Adolesc Health.* 2020 Oct;67(4):514–8.

9. APPENDICES

9.1. Information sheet and consent form

Title: Prevalence and factor affecting of Common Mental Disorder among health facility patients Bishoftu, Ethiopia: institutional based a cross-sectional survey

Name of principal investigator: NegaYifter

Name of the organization: Bishoftu Public Health Facility

Name of the sponsor: Addis Ababa University

Instruction: the investigator develops this information sheet and consent form with the goal of studying the prevalence and factor affecting of CMD among patients of public health facilities Bishoftu, Ethiopia. The researcher is an MPH student in health service management at Addis Ababa University School of Public Health.

Purpose: the overall objective of this research is to assess the prevalence and factor affecting of CMDs among patients of public health facility in Bishoftu Ethiopia.

Procedure: In order to assess the prevalence and factor affecting of CMDs I call on your cooperation and willingness to participate in this project . If you agree to participate in this project ,you need to understand and give written consent. Then you will be asked to give your response by filling out the to be filled by interviewer.

Why are you chosen: because you are a health facility attendee

Confidentiality: we will keep all information you provide us confidential to the best of our ability. Please keep in mind that the information gathered in this assessment will be utilized to inform health bureau, health facilities Data in aggregate form can be shared through reports, website, poster, conference and journal. Only anonymized and aggregated data will be shared.

Voluntary participation: your participation in this study is entirely voluntary .You have the freedom to refuse to participate or to say no. Participation in this study is not a program requirement. If you agree to participate, you may change your mind and withdraw at any moment and this will not affect your health.

Possible risk /discomfort: There is no known risk associated with this research. You can skip any question you don't want to answer, and you can exit the survey at any point if answering any of the questions makes you feel uncomfortable.

Possible benefits: there is no immediate benefit to taking part in this study. However, the information you will share with us, as well as information gathered from other study participants may help the health facilities and relevant stake holders in designing health initiatives related to CMDs.

Compensation: we will not compensate you for participating in this survey.

Length of survey: Thank you in advance for taking the time to complete the survey. It will take you about 20 minutes to complete.

If you have any concern or question, please contact the following:

NegaYifter

AAU-CHS,SPH

nyifter@gmail.com

+251913787495

If you are clear with the information given and willing to participate in this study ,you are kindly asked to sign the consent form attached below

9.2. **Table 6:Section 1:** Socio-demographic Questionnaire

Distribution of respondents by socio-demographic characteristics, Clinical, substance use, and psychosocial distribution among patients in Bishoftu general hospital, and health center BishoftuOromia, Ethiopia, 2023 - 2024. N=560

Code №	Variable	Categories	Response	Remark
101	Sex	Male		
		Female		
102	Age	15-24		
		25-34		
		35-44		
		45-54		
		≥55		
103	Marital status	Married		
		Single		
		Divorced		
		Widow		
104	Religion	Orthodox		
		Muslim		
		Protestant		
		Others		
105	Occupation	Farmer		
		Government worker		
		Daily laborer		
		Merchant		
		House wife		
		Student		
		Unemployed		
		retired		
106	Educational status	Unable to read		
		Primary 1-8		
		Secondary 9-12		
		Diploma and above		
107	Monthly income	<1000		
		1000-2500		

		2500-5000		
		>5000		
108	Chronic medical illness	Diabetes		
		Hypertension		
		Cardiac illness		
		Asthma		
		arthritis		
		Other chronic illness		
		Non chronic illness		
109	Residence	Urban		
		Rural		
110	Family history of mental illness	Yes		
		No		
111	Cannabis use	Yes		
		No		
112	Current alcohol use	Yes		
		No		
113	Current cigarette use	Yes		
		No		
114	Current khat use	yes		
		No		
115	How many people are so close to you that you can count on them if you have great personal problem? (number of close confidants)	‘none’		
		‘1-2’		
		‘3-5’		
		‘5+’		
116	How many interest and concern do people show in what you do? (Sense of concern from other people)	‘none’		
		‘little’		
		‘uncertain’		
		‘some’		
		‘a lot’		

117	How easy is it to get practical help from neighbors if you should need it? (accessibility of practical help)	‘very difficult’		
		‘difficult’		
		‘possible’		
		‘easy’		
		‘very easy’		

Table 7:Section 2: symptoms of attendees of health facilities for medical case other than mental disorder in Bishoftu General Hospital and health centers in Bishoftu, Oromia, Ethiopia, 2023-2024 n=560 (10).

Code	Variable	Categories	response	Remark
201	Do you often have head ache	Yes		
		No		
202	Is your poor appetite	Yes		
		No		
203	Do you sleep badly	Yes		
		No		
204	Are you easily frightened	Yes		
		No		
205	Do you have shaking hands	Yes		
		No		
206	Do you feel nervous, tense, or worried	Yes		
		No		
207	Is your digestion poor	Yes		
		No		
208	Do you have trouble thinking clearly	Yes		
		No		
209	Are you feeling unhappy	Yes		
		No		
210	Do you cry more than usual	Yes		
		No		

211	Do you find difficult to enjoy your daily activities	Yes		
		No		
212	Do you find it difficult to make decisions	Yes		
		No		
213	Is your daily work suffering	Yes		
		No		
214	Are you unable to play a useful part in life	Yes		
		No		
215	Have you lost interest in things	Yes		
		No		
216	Do you feel as a worthless person	Yes		
		No		
217	Has the thought of ending your life been on your mind	Yes		
		No		
218	Do you feel tired all the time	Yes		
		No		
219	Do you have uncomfortable feelings in your stomach	Yes		
		No		
220	Do you feel easily tired	Yes		
		No		

Other chronic illness: chronic kidney disease, pulmonary disease, cancer

Thank you for participating in this survey

9.3. Curriculum vitae

Nega Yifter Bihon

Address

NegaYifterBihon

BSc in Public Health

Town: Addis Ababa-Ethiopia Sub-City: Yeka

Email: nyifter@gmail.com

Telephone Number: (+251)913787495/942468308

PERSONAL DETAILS

Date of Birth: June 16, 1977 G.C

Place of Birth: Adwa (Tigray-Ethiopia)

Language: Tigrigna, Amharic and English

Sex : Male

Nationality: Ethiopian

Marital Status: Married

Nº of children Two

Health Excellent

KEY COMPETENCE

A total of about 23 years of experience in head department and teaching at various capacities with the following competencies;

- ✚ Recruit as of September 1998 at Ethiopian National Defense Force
- ✚ Company Commander as of September 5, 2002 at Ethiopian National Defense Force
- ✚ Battalion Commander as of July 30, 2003 at Ethiopian National Defense Force
- ✚ Assistance lecturer and Head Department of Radiology as of December 2008, Defense University College of Health Science
- ✚ Head of Department of Public Health as of September 2016, Defense University College of Health Science

🚦 Academic and Technical and Short-Term Trainings Dean and Assistance Lecturer August 2017- June 2018, Defense University College of Health Science.

HIGHER EDUCATION

2006 - 2008: Diploma in radiography technology. Defense University, Ethiopia

2013 - 2016: Degree of Bachelor of Science in Public Health. Rift Valley University, Ethiopia

EMPLOYMENT RECORDED

WORK EXPERIENCE

Employer: Ethiopian National Defense Force

Duration: September 1998 – August 2004

Position: Pvt. Company commander, battalion commander, at 21st division Ethiopian National Defense Force

Offering various courses trainings including Military trainings, Short term Human Resource Management, Topography

Employer: Defense University College of Health Science

Duration: December 2008 – July 2012

Position: Assistance lecturer and Head Department of Radiology December 2008 - July 2012

- ✓ Teaching diploma students radiological positioning, radiological equipment's
- ✓ Participate in different committees in the university.
- ✓ Carrying other extracurricular responsibility in the affair of the University.

Offering various courses including pedagogy, Human resource management, STI TOT training, gender based violence training (GBV)

Employer: Defense University College of Health Science

Duration: December 2016 – July 2017

Position: Head of Department of Public Health September 2016 - July 2017

- ✓ Teaching diploma students Health Education, Biostatistics
- ✓ Participate in different committees in the university
- ✓ Carrying other extracurricular responsibility in the affair of the University.

Offering Courses including case manager tot training, GPS,

Employer: Defense University College of Health Science

Duration: August 2016 – july 2017

Position : Academic and Technical staff and Short Term Trainings Dean and Assistance Lecturer

- ✓ I was responsible and in charge of all activities of the department.
- ✓ Manage, direct and monitor the day to day activity of department.
- ✓ Teaching diploma students Health Education and Biostatistics.
- ✓ Participate in different committees in the university.
- ✓ Carrying other extracurricular responsibility in the affair of the University.

CERTIFICATE COURSES /TRAININGS:

In my professional career, I have attended many workshops, meetings experience sharing, courses and training in different times and places on various issue including human resource management, services as translator of Ethiopian multirole logistic company in UNAMID, disarmament, demobilization and reintegration, effective teaching training, SBEM – R Module I, II, III, 2nd level cultural sport coaching course, sexually transmitted infection TOT, Acupuncture and Traditional Chinese medicine, basic case management, HIV care and Treatment, and procurement training. However, the certified courses and trainings are listed below;

2019: Obtain training on Procurement for 5 working days at Ethiopian Trading Business Corporation Procurement and Consultancy Service Unit.

2018: Basic National Comprehensive HIV care and Treatment for 15 working days organized by
CDC- Ethiopia.

2018: Basic Case Management training for 6 working days organized by NDHMD.

2017: Acupuncture and Traditional Chinese Medicine course for 30 working days at Second Military University Shanghai.

2017: Sexually Transmitted Infection training (TOT) for 6 working days organized by CDC – Ethiopia.

2016: 2nd Level Cultural Sport Coaching course for 10 working days organized by Ethiopian Cultural Sports Federation.

2014: Standard Based Educational Management – recognition (SBEM-R) I, II, III for 12 working days organized by(UCSD – E).

2011: Effective Teaching Methodology Training for 10 working days organized by UCSD – E

2010: Disarmament, Demobilization and Reintegration training for 16 working days organized by UNAMID.

SOCIETY MEMBERSHIP:

- Ethiopian Red Cross Society.

Reference

- DUCHS
- Col. Belachewkahssay MPH –defence university college of health sciences dean
- Col. AddisalemMesifin head of research department
- L/col. Belay Girma academic technic staff and short term training dean

9.4. CURRICULUM VITAE OF THE PRIMARY ADVISOR

I. PERSONAL DATA

Full Name:AdiamNegaSendek

E-mail :adiamnega123@gmail.com

Cell phone :0910365878

Addis Ababa, Ethiopia

eRA COMMONS USER NAME (credential, e.g., agency login): ADIAMNEGA

II. **POSITION TITLE:** Assistant Professor

III. EDUCATION/TRAINING QUALIFICATION

Institution and Location	DEGREE	Completion Date	FIELD OF STUDY
		MM/YYYY	
Jigjiga University, Ethiopia	BSc.	06/2013	BSc. in Public Health
Addis Ababa University, Ethiopia	MPH	07/2015	Masters of Public Health in Health Service Management
World Bank, Ethiopia	Certificate	07/2016	Certificate in flagship course on Universal Health Care Financing
Health Policy and Financing (HP& F),	Certificate	05/2021	KIT Royal Tropical Institute, Amsterdam, Netherland
University of Ibadan Nigeria	Certificate	01/2017	Certificate in Management and Leadership
Lund University, Sweden	Certificate	03/2019	Certificate in Pre- PhD course on complex intervention

IV. Personal statement

During my academic career, I have been engaged in research activities, community service, and teaching undergraduate and postgraduate students in the field of Health Systems Management and Health Policy. Also I have advised numerous undergraduate medical student and 10 Master of Public Health (MPH) students. In the department of Health Systems Management and Health Policy, I am serving as a secretary, and Academic Promotion Committee (APC). In addition I am graduate program coordinator for Health System Management (HSM) track student and I oversee the teaching, and research activities.

Since 2016 I am an active member of Women Health Research Working Group (WHRWG); the purpose of the working group is to build capacity of female faculty to conduct high impact and quality research and we have published original articles on Ethiopian Journal of Health Development as a special issue. In 2016 and 2017 I was a principle and Co- principal investigator for small adaptive problem solving research grants. Besides I am engaged in the area of monitoring and evaluation for the AAU-Emory D43 Junior scholars Program. In addition, I have

served in the area of evaluation for projects run under the Ethiopian Ministry of Health. Currently I am a PhD candidate at the Martin Luther University, Halle, Germany.

Positions and Honors

V. Positions and Employment

- 2015 -2018 Coordinator for Post Academic Mobility for African Physician Scientists (PAMAPS) project
- 2018- 2023 Lecturer, Department of Health System Management and Policy, School of Public Health, College of Health Sciences, Addis Ababa University.
- 2016-Present Serving in the area of monitoring and evaluation for the AAU-Emory D43 Junior scholars Program.
- 2020- Present Secretary for the Department of Health Systems Management and Health Policy.
- 2022-2023 Delegated Department head of Health Systems Management and Health Policy
- 2023- Present An assistant professor, Department Health System Management and Policy, School of Public

VI. Other Experience and Professional Memberships

- 2015- Present Member of Ethiopian Public Health Association (EPHA)
- 2016-2017 Member of Quality Improvement of TikurAnbessa Specialized Hospital
- 2016- Present Member of Women’s Health Research Working Group (WHRWG)
- 2019-Present Member of Imperial Toastmaster Club, Addis Ababa, Ethiopia
- 2020-Present Member of the Academic Promotion committee (APC) for Health Systems Management and Health Policy Department
- 2021- Present Committee member for community engagement program at Addis Ababa University.

Honors

- 2016 Small Adaptive Problem solving research grant award winner of Addis Ababa University
- 2017 Thematic Research grant award winner of Addis Ababa University as Co-PI
- 2023 Publication entitled “COVID-19 and resilience of healthcare systems in ten countries” was recognized as the 2022 high-impact publication by the College of Health Sciences of Addis Ababa University.
- 2023 Abstract reviewer at the American Public Health Association (APHA) 2023 held in USA
- Publications

VII. PUBLICATIONS (SELECTED)

1. Anagaw D, Adiam N, Anna G, Damen H, Munir K, Catherine A. Effect of the COVID-19 pandemic on health service utilization across regions of Ethiopia: an interrupted time series analysis of health information system data from 2019-202. PLOS Global Public Health. 2022; 2(9) e0000843. <https://doi.org/10.1371/journal.pgph.0000843>
2. Ephrem B Tigist H, Girma T, Wondimu A, Brehan T, Adiam N et al. Improving the Quality of Clinical Coding through Mapping of National Classification of Diseases (NCoD) and International Classification of Disease (ICD-10). Ethiopian Journal of Health Development. 2021; 35(1) 59-65
3. Berhan T, Adiam N , Demeke A, Ephrem B, Tigist H, Girma T et al. Quality of Primary Health Care during COVID-19 Pandemic in Addis Ababa Ethiopia: Patients-side and facility level assessment. Ethiopian Journal of Health Development (EJHD). 2021; 35 (1) 98-107
4. Fanuel B, Kasiye S, Adiam N, Anagaw D, Assefa S, Solomon S. Factors influencing place of delivery in Ethiopia: Linking individual, household, and health facility data. a. PLOS Glob Public Health 2(9): e0000535. <https://doi.org/10.1371/journal.pgph.0000535>
5. Catherine A, Anna G, Min Kyung K ,Neena R. , Patricia A, Freddie A..... Adiam N et al. COVID-19 and resilience of healthcare systems in ten countries. Nature Medicine. 2022; 8 1313-1324 <https://doi.org/10.1038/s41591-022-01750-1>
6. Adiam N , Seble A, Hanna D, Meron A, Bezawit K , Berhan T , Meaza G et.al.Experience of Research Undertaking among Women Academia at Addis Ababa University: a Qualitative Study. Ethiopian Journal of Health Development.2021; 35(2) 15-21
7. Meselech R , Workeabeba A , Abigia W , Adiam N, Selamawit G, Yalemwork G , Birhan T et.al. Gender Difference in Research Productivity and its Associated factors in Addis Ababa University: a Cross Sectional Study .Ethiopian Journal of Health Development.2021; 35(2) 15-21
8. Berhan T , Yalemwork G, Adiam N, Etsehiwot T, Workeabeba A, Meselech R et.al. Female Academic Career Development and Administrative Positions at Addis Ababa University: a Mixed-Method Study. Ethiopian Journal of Health Development.2021; 35(2) 15-21

9. Mesfin A, Adiam N, Berhan T, Demeke A, Dawit S, Yibeltal T, Hibret A, Damen H. Degree of adherence of the urban health extension service delivery process to the standards set nationally. *Ethiopian Journal of Health Development*.2020; 34(2)
10. Damen H, Berhan T, Adiam N, Demeke A, Dawit S, Yibeltal T, Hibret A, Mesfin A. Expectation and satisfaction of urban health extension workers regarding their service delivery environment. *Ethiopian Journal of Health Development*.2020; 34(2)
11. Demeke A, Adiam N, Berhan T, Mesfin A, Dawit S, Yibeltal T, Hibret A, Damen H. Preparedness of the Urban Health Extension Program to provide priority health services identified in its package. *Ethiopian Journal of Health Development*.2020; 34(2)
12. Damen H, Berhan T, Adiam N, Demeke A, Dawit S, Yibeltal T, Hibret A, Mesfin A. Patterns of utilization, expectations, and satisfaction of the community to urban health extension services. *Ethiopian Journal of Health Development*.2020; 34(2)
13. Damen H, Habtamu M, Adiam N, Meseret Y, Bruktait T, Miliard D. The impact of MEPI-junior faculty program on scholars and to the college of health sciences at large. *Ethiopian medical journal*, 2020; 58(2)
14. Tarylee R, Neena K, Shogo K , Svetlana D, Daisuke A , Damen H,Adiam N et.al. Associations between the stringency of COVID-19 containment policies and health service disruptions in 10 countries. *BMC Health Service Research*. Reddy et al. *BMC Health Services Research*. 2023; 23:363 <https://doi.org/10.1186/s12913-023-09363-1>
15. Tracking health system performance in times of crisis using routine health data: lessons learned from a multicountry consortium. Anne Marie T , Borwornsom L, Patricia A, Freddie A , Amit A,....Adiam N. *Health Research Policy and systems*. 2023; 23:363 <https://doi.org/10.1186/s12913-023-09363-1>
16. Ayele W, Gage A, Kapoor NR, Kassahun Gelaw S, Hensman D, Derseh Mebratie A, Nega A, Asai D, Molla G, Mehata S, Methethwa L, Mfeka-Nkabinde NG, Joseph JP, Pierre DM, Thermidor R, Arsenault C. Quality of routine health data at the onset of the COVID-19 pandemic in Ethiopia, Haiti, Laos, Nepal and South Africa. 2023 *BMC Population Health Metrics* in press
17. Alem S*, Mesfin A, Mengistu Y, Ephrem B, Adiam N, Tamiru D, Girma T. Routine Health Information Utilization and Associated Factors among Public Health Center

Managers in Addis Ababa, Ethiopia: A Cross-Sectional Study. Journal of Health Development. 2022

18. The maternal and newborn health eCohort to track longitudinal care quality: study protocol and survey development

Research Support

Completed research support

1. Thematic Research Grant, AAU Dr. GirmaTaye (PI) 2/10/2019-30/07/2022

Improving quality of patient care, quality of data and e-health towards digitalization Assessing status and suggestion for improvement of quality of patient care quality of data, culture of clinical data use, and e-health towards digitalizing and integration in health facilities of Addis Ababa city administration is the objective of the study. Role: Co-PI

2. Harvard University, AAU, Ministry of Health and EPHI Prof. DamenHailemariam (PI) 10/5/2020-1/1/2022

Mapping the Indirect effect of a Health Crisis: Health Systems Performance for Core Service during COVID-19

Assessing the Indirect effect of a Health Crisis: Health Systems Performance for Core Service during COVID-19. Role: Analytic core member

3. Thematic Research grant, AAU Dr. MitikeMolla (PI) 2/10/2017-30/07/2020

Narrowing the Gender Gap in Research: Empowering Female Faculty in Research undertaking

The purpose of the project is to assess the gender gap in research and strengthen the research capacity of female faculty at Addis Ababa University through need based training, mentoring and hands on research undertakings. Role: Co-PI

