

ARSI UNIVERSITY

COLLEGE OF HEALTH SCIENCE

DEPARTMENT OF INTERNAL MEDICINE



**Level of Satisfaction and Associated Factors Among Clients Enrolled In The
Community Based Health Insurance Scheme At Asella Referral And Teaching
Hospital, Ethiopia**

By: Wondwosen Mulatu (MD, Internal Medicine Resident)

Asella , Ethiopia

January, 2026

**Level of Satisfaction and Associated Factors Among Clients Enrolled In The
Community Based Health Insurance Scheme At Asella Referral and Teaching
Hospital, Ethiopia**

**A thesis report submitted to Department of Internal Medicine, College of
Health Sciences, Arsi University; In partial fulfillment of the requirements of
Specialty Certificate In Internal Medicine**

By: Wondwosen Mulatu (MD, Internal Medicine Resident)

Advisors:

Dr. Mulugeta Solomon (MD, Asst. Prof. of Internal Medicine) &

Mr. Abdurehman Kalu (BSc, MPH, Asst. Prof)

Department of Internal Medicine

January, 2026

Approval Sheet

Name of Investigator	Wondwosen Mulatu (MD Year III Internal Medicine Resident)
Name of advisors	Dr. Mulugeta Solomon (MD, Ass't Professor Of Internal Medicine) Mr. Abdurehman Kalu (BSc, MPH, Asst. Professor)
Full tittle of the research project	Level of Satisfaction and Associated Factors Among Clients Enrolled In The Community Based Health Insurance Scheme at Asella Referral and Teaching Hospital, Ethiopia
Study Period	From August 11, 2025 - November 30, 2025
Study area	Asella Teaching and Referral Hospital, Asella, Ethiopia
Total cost of the project	27,412.00 ETB
Address of the investigator	Dr. Wondwosen Mulatu Phone: 0910994877 Email: wondiemek04@gmail.com
Address of Clinical advisor	Dr Mulugeta Solomon Phone; +251922220834
Address of Public health advisor	Mr. Abdurehman Kalu Phone: +251924545690 E-mail: abdurehmankelu900@gmail.com

Abstract

Background: Client satisfaction is a key indicator of healthcare quality and a determinant of the sustainability of Community-Based Health Insurance (CBHI) schemes. Evidence on satisfaction levels and associated factors remains limited in Ethiopia, particularly in referral hospital settings.

Objective: To assess the level of client satisfaction and identify associated factors among CBHI-enrolled clients at Asella Referral and Teaching Hospital (ARTH), Arsi Zone, Ethiopia.

Methods: An institution-based cross-sectional study was conducted from August 11 to November 30, 2025, among 402 CBHI-enrolled clients. Data were collected using a structured interviewer-administered questionnaire, with satisfaction measured on a 5-point Likert scale. Binary and multivariable logistic regression analyses were performed. Variables with $p < 0.20$ in bivariate analysis were included in the multivariable model, and statistical significance was set at $p < 0.05$.

Results: The overall client satisfaction level was 75.9% (mean score = 3.84 ± 0.59). Most respondents intended to renew CBHI membership (99.3%) and reported high satisfaction with staff courtesy and hospital cleanliness ($> 95\%$). However, major service gaps were identified: 69.2% of clients did not receive all prescribed medications, and 71.4% did not obtain all requested laboratory services, resulting in the lowest satisfaction score for out-of-pocket payments (mean = 2.90 ± 1.32). Clients aged 18 – 29 years (AOR = 0.33; 95% CI: 0.12 – 0.90) and 30 – 44 years (AOR = 0.38; 95% CI: 0.15 – 0.95) were less likely to be satisfied compared to those aged ≥ 60 years. Lower educational status, longer CBHI enrollment (≥ 5 years), and participation in CBHI meetings (AOR = 1.70; 95% CI: 1.00 – 2.91) were associated with higher satisfaction.

Conclusion: Although overall satisfaction and intention to renew CBHI membership were high, significant dissatisfaction related to the availability of essential drugs and diagnostic services persisted. Client satisfaction was influenced by age, education level, duration of enrollment, and scheme engagement. Improving the availability of medicines and laboratory services, strengthening communication, and addressing the expectations of younger and more educated clients may enhance satisfaction and support the sustainability of the CBHI program.

Keywords: *community based health insurance, client satisfaction, associated factors, hospital services, ethiopian cbhi scheme*

Acknowledgement

First of all, I would like to praise and give thanks to God for his grace and blessings over this work. Second, I would like to express my deep gratitude to my advisors Dr. Mulugeta Solomon and Mr. Abduehman Kalu for their comments and suggestions. Also, I would like to extend my heartfelt thanks to W/ro Rahel Dhuga focal Person of CBHI at Asella Referral and Teaching Hospital for sharing important data helpful for this study.

Acronym and Abbreviations

ARTH	Asella Referral and Teaching Hospital
BPR	Business Processing and Re-Engineering
CBHI	Community Based Health Insurance
CHE	Catastrophic Health Expenditure
EBC	Evidence Based Medicine
GDP	Gross Domestic Product
HH	House Hold
LMICs	Low and Middle Income Countries
SBFR	System Bottleneck Focused Reform
SDGs	Sustainable Development Goals
SHI	Social Health Insurance
SPSS	Statistical Package for Social Science
UHC	Universal Health Coverage

Table of Contents

Contents	Page
Abstract	ii
Acknowledgement.....	iii
Acronym and Abbreviations	iv
Table of Contents	v
List of Tables.....	vii
List of Figures	viii
CHAPTER 1.....	1
Introduction	1
1.1 Background	1
1.2 Statement of the Problem	4
1.3 Significance of the study	6
CHAPTER 2.....	7
Literature Review	7
2.1 Universal Health Coverage and Health Financing	7
2.2 Community-Based Health Insurance and Health Financing in Ethiopia.....	8
2.3 Patient Satisfaction and Healthcare Quality	9
2.4 Health Insurance Satisfaction and Associated Factors	9
2.5 Conceptual Framework	13
CHAPTER 3.....	14
OBJECTIVES	14
3.1 General objective.....	14
3.2 Specific objectives.....	14
CHAPTER 4.....	15
METHODOLOGY	15
4.1 Study Setting and Period	15
4.2 Study Design	15
4.3 Population.....	15
4.3.1 Source Population.....	15
4.3.2 Study Population	15
4.4 Eligibility Criteria.....	15
4.4.1 Inclusion Criteria	15

4.4.2 Exclusion Criteria	16
4.5 Sample Size and Sampling Technique	16
4.5.1 Sample Size Determination	16
4.5.2 Sampling Technique	17
4.6 Study Variables	17
4.6.1 Dependent Variable	17
4.6.2 Independent Variables	17
4.7 Operational Definitions	17
4.8 Data collection Tools.....	18
4.9 Data Quality Management.....	18
4.10 Data Processing and Management.....	18
4.11 Statistical Analysis	19
4.12 Ethical consideration	19
4.13 Dissemination plan	19
CHAPTER 5.....	20
RESULT	20
5.1 Socio-Demographic Characteristics	20
5.3 Health service provision experience of participants.....	25
5.4 Level of Satisfaction with CBHI scheme	26
5.5 Factors influencing satisfaction of CBHI enrolled clients.....	28
CHAPTER 6.....	30
DISCUSSION	30
Strength and Limitation.....	32
Conclusion and Recommendations	33
Recommendations	34
CHAPTER 7.....	35
References	35
ANNEXES	39
Annex I: Information sheet and Consent Form	39
Annex II: Questionnaire (English Version).....	40
Annex III: Consent (Afan Oromo Version).....	44
Annex IV: Consent (Amharic Version).....	49
Annex V: DECLARATIONS.....	54

List of Tables

Table 1: Socio-demographic Characteristics of CBHI scheme Enrolled Clients who visit ARTH, Arsi Zone, Ethiopia 2025 ($n = 402$)	21
Table 2: Knowledge and experience of participants (CBHI scheme enrolled Clients) about the process & management of the CBHI scheme at ARTH, Arsi, Ethiopia 2025 ($n = 402$)	23
Table 3: Health service provision-related characteristics of CBHI scheme enrolled Clients who visit ARTH, Arsi Zone, Ethiopia 2025 ($n = 402$)	25
Table 5: Bivariate and Multivariate logistic regression analysis results on factors associated with CBHI client satisfaction at ARTH, Arsi Zone, Ethiopia 2025 ($n=402$)	29

List of Figures

Figure 1: Conceptual Framework For Client's Satisfaction	13
Figure 3: Distance of residency from Hospital (Hrs) of participants at ARTH, Arsi, Ethiopia 2025 ($n = 402$)	22
Figure 4: Number of times participants visit the hospital at ARTH, Arsi, Ethiopia 2025 ($n = 402$)	24
Figure 5: Length(year) of enrolment under CBHI of participantsat ARTH, Arsi, Ethiopia 2025 ($n = 402$)	24

CHAPTER 1

Introduction

1.1 Background

Health is a fundamental human right and a cornerstone of sustainable development. Globally, nations strive to ensure that their populations have access to quality healthcare services. However, promoting health comes at a significant cost. [1]

Globally, health expenditure has seen a significant rise, reaching a new high of US\$9.8 trillion in 2021, accounting for 10.3% of the global gross domestic product (GDP).[1]

The global commitment to the principle of ‘leaves no one behind’ has prompted nations across the globe to strive toward the attainment of universal health coverage (UHC).[2]

The adoption of UHC as a global goal was formalized in 2015 when it was included in the Sustainable Development Goals (SDGs) under Target 3.8. Nations agreed to implement UHC to ensure that no one is left behind, particularly the poorest and most vulnerable populations. Universal Health Coverage (UHC) is both a moral and economic imperative, and in resource-limited settings, Community-Based Health Insurance (CBHI) schemes have emerged as a key strategy to improve healthcare access, enhance financial protection, reduce out-of-pocket spending, and prevent catastrophic health expenditures.[3]

The CBHI was emerged to guarantee financial protection by reducing out of pocket expenditures and improving health care access through pooling of resources and risks among community members, particularly in the resource-limited settings.[4]

Developed nations achieve UHC with a robust and adequate health financing mechanisms, efficient resource allocation and strong political commitment. However, their success is also attributed to their high-income status, which enables them to allocate a significant portion of their GDP to healthcare. For instance, the UK spends approximately 9.8% of its GDP on health, while Germany spends 11.7%. [5] These experiences highlight the importance of political will and sustainable financing in achieving UHC. [6]

In contrast, Low and Middle income Countries (LMICs) face significant challenges in achieving UHC. Limited financial resources, inadequate healthcare infrastructure, and a high

burden of disease impede progress. Notably, while high-income countries account for 78% of global health spending despite comprising only 16% of the world's population, LMICs struggle with constrained budgets and competing development priorities. This disparity often results many individuals in these countries rely on out-of-pocket payments for healthcare, which can lead to catastrophic health expenditures and push families into poverty. According to the WHO, over 930 million people worldwide spend more than 10% of their household income on healthcare, with the majority living in LMICs.[7-8]

To address these challenges, LMICs have adopted various healthcare financing mechanisms. Among which Rwanda and Ghana have made progress and successful story by implementing Tax-Based Financing and Social Health Insurance (SHI) schemes respectively, demonstrate that UHC is achievable in LMICs with innovative financing mechanisms and strong political commitment.[9-10]

For the achievement of UHC, Ethiopia has also adopted & established a health financing mechanisms for a comprehensive & sustainable risk protection through insurance scheme. It has two major components namely; Social Health Insurance (SHI) and Community-Based Health Insurance (CBHI). SHI is recommended for the formal sector and is in preparatory phase of implementation. CBHI meanwhile has been endorsed and is being expanded to secure financial protection for over 85% of the Ethiopian population who are engaged in the informal sector and have limited protection from other sources.[2]

Community-based health insurance (CBHI) is a vehicle used by the government to ensure universal health access to all people, especially the poorest and most vulnerable groups of society. [11]

The country employs the CBHI and the social health insurance systems to cover households' health-related costs. CBHI is mainly for the informal sector, while SHI is for formal sector employees. CBHI was launched in 2012 as a voluntary health insurance scheme in which members' pool premium payments into a collective fund and cover basic health care costs at local health centers that would otherwise be covered through out-of-pocket spending. The government covers the premium costs of the 10 percent indigent population. Since its implementation, CBHI has helped to improve access to health services, mobilize community resources, provide financial protection, and empower women. [11]

Satisfaction of the enrolees is the desired outcome of healthcare services. Moreover, client satisfaction reflects the gap between the expected services and the experience of the service. Satisfaction is a multidimensional concept influenced by individual perceptions, expectations, and service delivery experiences. The quality of health services is crucial for both member satisfaction and the sustainability of CBHI. Patient satisfaction serves as a critical indicator of healthcare quality and effectiveness, with studies showing that higher satisfaction levels lead to improved health-seeking behaviours, better treatment adherence, and stronger patient-provider relationships.[12-14]

Globally, client satisfaction among those enrolled in Community-Based Health Insurance (CBHI) schemes varies based on the quality and accessibility of healthcare services provided. Studies indicate that satisfaction is influenced by factors such as affordability, availability of services, healthcare provider attitudes, and the alignment between expected and received care. For instance, research in sub-Saharan Africa highlights that while CBHI improves access to healthcare, dissatisfaction often arises from long waiting times, inadequate drug supplies, and perceived poor service quality.[15] Similarly, in Asia, studies in India and Bangladesh reveal mixed satisfaction levels, with positive feedback on financial protection but concerns over service quality and provider behaviour.[16] In Rwanda, CBHI enrollees reported higher satisfaction due to reduced out-of-pocket expenses and improved access to care, though challenges like overcrowding and resource limitations persisted.[17] Overall, while CBHI schemes enhance healthcare access and financial protection, achieving high client satisfaction requires addressing systemic issues like resource availability, service efficiency, and provider-patient interactions.

Community-Based Health Insurance (CBHI) in Ethiopia has significantly improved healthcare access, financial protection, and enhanced health equity. Insured households, particularly in regions like East Wellega Zone, Oromia, show higher healthcare utilization due to factors such as family health status, chronic diseases, and drug availability. CBHI also reduces catastrophic health expenditures, safeguarding households from financial hardship and promoting equitable access across socioeconomic groups. Additionally, the scheme has enhanced healthcare infrastructure, increased medical supplies, and improved diagnostic and pharmaceutical services, strengthening the overall healthcare system. In summary, CBHI has boosted healthcare access, provided financial security, and improved service quality nationwide.[18-20]

Although it has all those outcomes stated above, various studies have identified that the scheme faces significant challenges related to client satisfaction and knowledge gaps, which hinder its effectiveness in achieving universal health coverage.

Client satisfaction with CBHI is influenced by several factors, including the quality and availability of healthcare services, provider attitudes, waiting times, and financial barriers. Studies have shown that frequent drug stockouts, inadequate laboratory services, and unfriendly provider interactions contribute to dissatisfaction among CBHI members.[21] Additionally, despite CBHI's goal of reducing healthcare expenses, some members still face extra costs beyond their annual premiums, leading to frustration.[22] Enrolment rates vary across regions due to factors such as household wealth, education, and family size.[23]

Ethiopia's CBHI scheme, launched in 2010, aims to achieve universal health coverage by reducing financial barriers to care.[24] Prior studies on CBHI satisfaction, such as large-scale assessment in Amhara and Oromia regions, found 60–75% satisfaction rates at health centers, driven by affordability but limited by drug stockouts.[25] Similarly a cross-sectional survey across 20 health centers identified long wait times as a key dissatisfaction factor.[26] However, these studies focus overwhelmingly on primary care, neglecting referral hospitals where care complexities and patient expectations differ significantly.

1.2 Statement of the Problem

Community based health insurance (CBHI) schemes are usually voluntary and characterized pooling funds by community members to protect themselves against the high cost of medical care.[12]

Under CBHI, satisfaction of the enrolees is the desired outcome of healthcare services. Moreover, client satisfaction reflects the gap between the expected services and the experience of the service. [14] The client's satisfaction is a multidimensional and broader concept taking into account the individual perceptions, expectations, subjective disconfirmation and experience during service delivery.[12], [14]

Quality of health services is critical for member satisfaction and sustainability of the CBHI scheme. As CBHI is scaled up and more time passes, the role of quality of health services in CBHI enrolment in Ethiopia might become more evident. [13]

The global level of satisfaction with CBHI was 56.3%. In Africa, the level was 73.7%. [27] While in Ethiopia different studies show result which are different; In Addis 46.3%, Study done in southern Ethiopia shows 63.1% satisfaction, Study done in Eastern part shows 55.1%, in North West Ethiopia 33.5%. Also these studies reveal that factors associated with clients satisfaction are availability of medication and laboratory tests, residency area of the client, frequency of visits, level of knowledge, payment during referral time, number of family members, age, health services provider friendliness, CBHI offices opening times, membership card collection process, time interval to use of services (shorter waiting times), knowledge of CBHI benefit packages. [14], [27-30]

Methodologically, most Ethiopian studies on Community-Based Health Insurance (CBHI) have relied on retrospective designs. For instance, a nationwide assessment by Alemu et al. employed interviewer-administered surveys conducted several days after service utilization, which may introduce recall bias. [31] Similarly, a 2023 systematic review highlighted the lack of real-time satisfaction assessments in hospital settings.[32] Moreover, no published study has examined CBHI client satisfaction at Asella Referral and Teaching Hospital (ARTH), despite its critical role as the largest referral facility in Oromia, serving an estimated population of five million.

This study addresses these methodological and contextual gaps by conducting real-time exit interviews using KoBo Toolbox, a data collection approach validated for low-resource settings. By generating timely and context-specific evidence, the study aims to inform actionable interventions to improve service delivery and contribute to the sustainability of the CBHI scheme. In addition, the findings will enrich the existing body of knowledge and provide practical input for the on-going implementation of CBHI in Ethiopia.

Overall, the limited available literature in Ethiopia on CBHI client satisfaction and its associated factors is both scarce and inconsistent, and no prior study has been conducted in the current study area. Therefore, this study aims to assess the level of client satisfaction with healthcare services under the CBHI program and to identify factors associated with satisfaction at ARTH. The results will indicate the extent of client satisfaction and highlight key determinants influencing their experiences with CBHI-supported healthcare services.

1.3 Significance of the study

This study assessed the level of satisfaction of CBHI members who got health service at ARTH and factors that contribute to their satisfaction. This will fill in the information gap and point direction of action that should be taken to help sustain the scheme. In addition, the findings of this research will add the current knowledge and be used as an input for the still on-going implementation of CBHI.

CHAPTER 2

Literature Review

2.1 Universal Health Coverage and Health Financing

Access to quality health remains a significant challenge worldwide, particularly in low income countries. For health service globally more than three billion people pay out of pocket and around 400 million lack access to essential health care. Furthermore, every year approximately 100 million individuals are pushed in to poverty due to health care expenses, while many others forego necessary treatment due to financial constraints. Universal Health Coverage (UHC) is a fundamental strategy aimed at ensuring that all individuals have access to necessary health service without financial hardship. The United Nations recognized UHC as a crucial element in poverty reduction and sustainable development in 2015, with all member states committing to its achievement by 2030. However, achieving UHC remains challenging due to design, technical and financial hurdles, particularly in addressing informal sector populations, restructuring health service delivery, and optimizing healthcare financial mechanism.[\[8\]](#)

UHC is essential for promoting well-being and achieving global health equity. To achieve this goal, countries must implement effective health financing mechanisms that mobilize resources efficiently, equitably, and accountably. Sustainable healthcare financing necessitates sufficient governmental capacity to mobilize and manage resources while maintaining transparency and accountability. Expanding health coverage protects individuals from catastrophic healthcare costs, improving both population health and economic stability.[\[8\]](#)

Despite global efforts, progress towards UHC has stagnated in many regions. However, some countries have made significant strides in extending service coverage while reducing the population's out-of-pocket health expenditures. Notably, 30% of countries have expanded service coverage while simultaneously improving financial protection. [\[33\]](#) This progress highlights the feasibility of implementing effective healthcare strategies to reduce financial hardships, particularly for vulnerable populations.

2.2 Community-Based Health Insurance and Health Financing in Ethiopia

Ethiopia's healthcare financing system remains underdeveloped compared to other low-income African nations. The country's total government health expenditure accounts for only 2% of its GDP, significantly below the expected 5% for low-income countries and the global average of 9.2%. Although Ethiopia has increased its government health spending in recent years reaching 8.7% of total government expenditure in 2022/23 it still falls short of the 15% Abuja Declaration target set by many African nations. [8], [34]

Approximately 34% of Ethiopia's healthcare financing comes from external sources such as donor funds. However, reliance on donor funding poses a significant challenge to the sustainability of healthcare programs. Additionally, reductions in donor funding due to financial constraints and inefficiencies in fund absorption, liquidation, and coordination have further strained Ethiopia's healthcare financing system. [35]

Out-of-pocket healthcare expenditures remain high in Ethiopia, accounting for 30.5% of total health expenditures in 2020. This financial burden leads to catastrophic health expenditures (CHE), where households spend an unsustainable proportion of their income on healthcare. Approximately 2.4% of Ethiopian households experience CHE, often leading to impoverishment as families struggle to afford necessary medical services. [35]

To improve healthcare accessibility and financial protection, Ethiopia introduced Community-Based Health Insurance (CBHI) in 2011. Initially launched in 13 districts as a pilot program, CBHI has since expanded to 720 districts, covering approximately 8.98 million households (equivalent to 41.6 million individuals). CBHI allows households in rural and urban informal sectors to access essential healthcare services by paying a nominal annual premium. [8]

The CBHI program has demonstrated significant benefits, increasing healthcare utilization and financial protection. For instance, outpatient visits per capita among CBHI members (2.09 visits) are higher than the national average (1.77 visits). Additionally, the scheme has reduced out-of-pocket healthcare expenditures for CBHI members, with annual per capita healthcare spending among CBHI households (ETB 308 or \$6 USD) being significantly lower than non-CBHI households (ETB 614 or \$12 USD). [8], [19]

A community based comparative cross sectional study done in our country shows that insured households were more likely to utilise health services about 60.5% compared with non-insured households.[18]

A study which compares catastrophic health expenditure among chronic disease patients of insured and uninsured in this hospital also reveals that Community-based health insurance contributes reduction in the incidence of catastrophic health expenditure among chronic patients. [36]

2.3 Patient Satisfaction and Healthcare Quality

Patient satisfaction is a critical indicator of healthcare quality and service effectiveness. It reflects the difference between expected and experienced service quality from the patient's perspective. Several studies have shown that higher patient satisfaction levels correlate with improved health-seeking behaviours, better adherence to treatment plans, and enhanced patient-provider relationships. [12]

The Ethiopian Hospital and Primary Health Care Alliance for Quality has established guidelines to improve service quality, focusing on increasing supply availability, enhancing provider skills, and improving working conditions. The Ethiopian Ministry of Health is also taking different actions for assuring health service qualities at different times like Business processing and reengineering (BPR), Evidence Based Care (EBC) and recently expanding SBFR (System Bottleneck Focused Reform). However, the interaction between CBHI and healthcare quality remains an area requiring further research. [13]

2.4 Health Insurance Satisfaction and Associated Factors

Studies from various countries provide insights into factors influencing patient satisfaction with health insurance schemes. In Nigeria, satisfaction with health insurance was observed at 42.1%, with marital status, general knowledge, and awareness of contributions influencing satisfaction levels. [37] In Ghana, insured patients reported higher satisfaction levels compared to uninsured patients, with key predictors including waiting times, staff friendliness, and consultation satisfaction. [38] Similarly, in Bangladesh, the overall satisfaction mean score was 4.17 out of 5, with diagnostic services, healthcare facility environments, and provider behaviour being the most highly rated aspects. [39]

In Ethiopia, patient satisfaction reflects the wide gap between the current experience and the expected services that push clients to go to more far health care facilities and even to more expensive private health facilities to find quality healthcare services. A review and

meta-analysis conducted in 2021 to measure Patient satisfaction towards health care services provided in Ethiopian health institutions shows that the pooled proportion of satisfied patients was 63.7%. This review also identifies factors like attending a health centre (AOR = 2.68; 95% CI = 1.79, 2.85), being literate (AOR = 0.46; 95% CI = 0.28-0.64), being younger than 34 years old (AOR = 2.07; 95% CI = 1.28, 2.85), and being divorced (AOR = 0.58; 95% CI = 0.38, 0.88) were being associated with patient satisfaction. [40]

Other two reviews and meta-analysis done to measure patient satisfaction towards CBHI reveals a pooled satisfaction of 62.26% and 66.0% with regional variation in house hold satisfaction. The first review found the CBHI scheme, availability of drugs, friendly services, affordability of premium, and knowledge/awareness of CBHI as factors associated with satisfaction. Whereas the second found socio demographic, health service-related, the scheme's related factors, and the beneficiaries' knowledge influences household's satisfaction. [15], [22]

Studies done at the site of CBHI relatively shows higher satisfaction rates. An institutional based cross-sectional study done at Boru Meda Hospital, Northeast, Ethiopia found that the overall client satisfaction was 80% at 95% CI (76.1, 83.9). Similarly a community-based cross-sectional study done in one of the pilot district in South Ethiopia also revealed that overall household satisfaction with CBHI was 91.38 %. Age, family size, laboratory services provision, health services provider friendliness, CBHI offices opening times, membership card collection process, time interval to use of services and full availability of prescribing drugs were significant predictors of satisfaction with CBHI. [12], [28]

Other studies that measure satisfaction of clients towards the provided health service and factors associated with their satisfaction to members of CBHI shows discrepant results and summarised as follows.

An Institutional-based cross-sectional study done in 10 health centres in Addis Ababa found the overall satisfaction level of households with the community-based health insurance was 46.3%. Satisfaction was associated with valid CBHI management regulations (AOR = 1.96, 95% CI: 1.12, 3.46), participants who received the right drug (AOR = 1.77, 95% CI: 1.08, 2.93), households who got immediate care (AOR = 4.95, 95% CI: 2.72, 8.98), those who agreed with the adequacy of medical equipment (AOR = 1.65, 95% CI: 1.02, 2.69), and households who agreed with qualification of health personnel (AOR = 1.89, 95% CI: 1.12, 3.20) were more satisfied with the scheme than their counterparts. [29]

A community-based cross-sectional survey assessed CBHI scheme enrolment and clients' satisfaction among households in Gondar Zuria district shows that two-thirds (66.5%) of enrolled households were dissatisfied with the overall services making the satisfaction rate 33.5%. Provided; in particular, higher proportions were dissatisfied with the availability of medication and laboratory tests (88.7%). Household size (AOR = 1.31, 95% CI: 1.01–2.24; $p = 0.043$) and waiting time to get healthcare services (AOR = 3.14, 95% CI: 1.01–9.97; $p = 0.047$) were predictors of clients' satisfaction with the CBHI scheme services. [30]

An institutional-based cross-sectional study done in 2023 shows overall level of the clients' mean satisfaction toward health service provision was 63.1% (3.95 ± 0.47 SD). This study found that the perceived level of client satisfaction is higher than previous studies. Residence, frequency of visits, level of knowledge, payment during referral time, number of family members and frequency of visits were identified as predictors of client satisfaction on the health service provision. [14]

In general, CBHI members expect higher service quality due to their financial contributions. However, challenges such as age, family size, being divorced, residency area, being literate (level of Knowledge), knowledge/awareness of CBHI, frequency of visits, affordability of premium, membership card collection process, CBHI offices opening times, valid CBHI management regulations, waiting time to get healthcare services, health services provider friendliness, full availability of medication and laboratory tests, payment during referral time, infrastructure of health facility and cleanliness of the facility.[12-15], [27-29]

Studies indicate that satisfaction rates among CBHI members vary, with some districts reporting satisfaction levels as low as 33.5%, while others reach over 90%. [13] This variability underscores the need for targeted improvements in healthcare service delivery.

Domains of Satisfaction

Studies conducted both nationally and internationally have demonstrated that satisfaction levels are significantly influenced by the following domains.

Socio-Demographic Factors:- Socio-demographic characteristics, key factors such as age, gender, marital status, family size, education level, place of residence (urban vs. rural), and occupation have been found to play a crucial role in shaping individuals' satisfaction.

CBHI Process, experience and Management: - The efficiency and management of the Community-Based Health Insurance (CBHI) system have a direct impact on overall satisfaction. Important aspects include the accessibility of CBHI offices (such as operating hours), the ease of membership card collection, number of visits to the hospital, the waiting time between registration and service usage, the affordability of premiums, awareness of benefit packages, and the length of membership experience. These factors strongly determine members' perception and satisfaction with the CBHI system.

Health Service Provision: - The quality and availability of healthcare services significantly affect patient satisfaction. Key determinants include the provision of efficient laboratory services, the availability of prescribed medications and imaging modalities, and the friendliness and professionalism of healthcare providers. Additionally, the provision of immediate, respectful, and compassionate care further enhances overall satisfaction with healthcare services.

2.5 Conceptual Framework

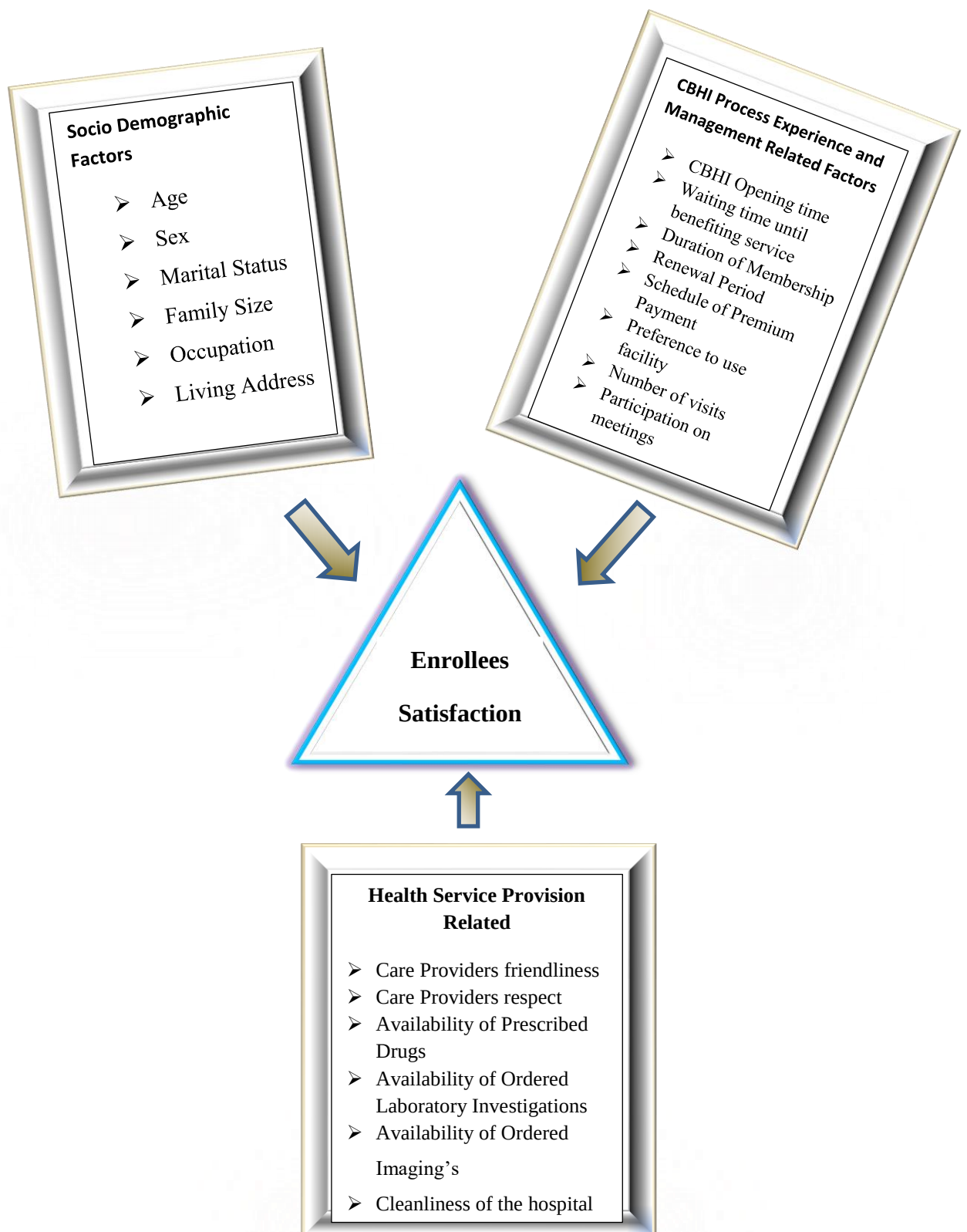


Figure 1: Conceptual Framework For Client's Satisfaction Revised and Developed From [14], [28], [29], [40]

CHAPTER 3

OBJECTIVES

3.1 General objective

- This study aims to assess the level of satisfaction and associated factors related to health services provided among clients enrolled in the Community-Based Health Insurance (CBHI) scheme at Asella Referral and Teaching Hospital in 2025

3.2 Specific objectives

- To determine the level of satisfaction among clients enrolled in the Community-Based Health Insurance (CBHI) scheme at Asella Referral and Teaching Hospital in 2025
- To identify factors associated with client satisfaction with health services provided to CBHI members at Asella Referral and Teaching Hospital in 2025

CHAPTER 4

METHODOLOGY

4.1 Study Setting and Period

The study was conducted at Asella Referral and Teaching Hospital from October 1, 2025 to December 31, 2025. Asella is a town located in Arsi Zone of Oromia Region in South East Ethiopia, 175km from the capital city, Addis Ababa.

Asella Teaching and Referral Hospital, which provides medical services for more than 3.5 million inhabitants and 544,966 CBHI-enrolled households in the Arsi Zone. The hospital has been serving as a teaching hospital of the college of Health Science Under Arsi University. Asella Referral and teaching hospital is serving as a referral center of CBHI for 21 woredas; 20 from Arsi zone and a single woreda, Gedeb Asasa from West Arsi zone for its proximity, like remaining woredas of Arsi for instance Gololcha are getting health services at Adama.

4.2 Study Design

An institutional-based cross-sectional study design was conducted

4.3 Population

4.3.1 Source Population

The source population were all clients who are members of CBHI scheme randomly visiting ARTH for any health care.

4.3.2 Study Population

The study population encompasses any client who is member of CBHI scheme, visits ARTH during data collection period.

4.4 Eligibility Criteria

4.4.1 Inclusion Criteria

Insured clients (adults, guardians or parents of children) who attended outpatient and

inpatient departments, agreed to participate in the study were included.

4.4.2 Exclusion Criteria

Clients who were insured but visited the hospital for services not under CBHI package and those who visited the hospital for exempted services were excluded from the study.

4.5 Sample Size and Sampling Technique

4.5.1 Sample Size Determination

Sample size was determined by using single population proportion formula and by considering the following assumptions; proportion (taken from a study done in Addis Ababa on satisfaction level of CBHI members (46.3%) [29], a level of significance of 5% , with a corresponding critical value of $Z_{\alpha/2} = 1.96$ for normal distribution), by adding 5% non-response rate. The sample size was calculated as

where, n = sample size

$$n = \frac{(Z_{\frac{\alpha}{2}})^2 pq}{d^2}$$

d = 0.05, margin of error

$$n = \frac{(1.96)^2 0.463 (1-0.463)}{(0.05)^2}$$

p = taking 46.3%

q = 1- p

$$n = 382$$

$Z_{\frac{\alpha}{2}} = 1.96$ (Confidence level)

By adding 5% non-response rate, the final sample size was 402

4.5.2 Sampling Technique

The total sample size was allocated proportionately for each data collection days during the study period, depending on the average number of clients who visited the hospital one month before the start of the study. Then study participants were identified by systematic random sampling method.

In addition, the first client to get the starting point was picked by Simple random sampling. Thereafter, depending on sampling interval every 4th client was selected for exit interviews until the sample size attained.

4.6 Study Variables

4.6.1 Dependent Variable

- Clients Satisfaction

4.6.2 Independent Variables

- Socio-demographic variables: age, sex, educational status, marital Status , family size, living Address.
- Health Service Provision Variables: Care Providers; friendliness, respect, Availability of; Drugs, Laboratory Investigations, Imaging's , Cleanliness of the hospital
- Process Experience and Management Variables: CBHI Opening time, Waiting time until benefiting service, Duration of Membership, Renewal Period, Schedule of Premium Payment, Number of visits, Participation on meetings, Preference to use facility.

4.7 Operational Definitions

Satisfaction with CBHI

The overall satisfaction to the CBHI scheme was assessed based on 10 satisfaction questions developed from previous literatures. Each item employed a five-point Likert scale ranging from 1 = “strongly disagree” to 5 = “strongly agree.” The overall satisfaction was computed by taking the mean score of ten Likert-scale satisfaction items after reverse-coding negatively worded questions. The composite score was dichotomized using the overall mean

cut-off value of 3.41. Respondents scoring ≥ 3.41 were categorized as “satisfied”, whereas those scoring below 3.41 were categorized as “not satisfied.” [41-42]

CBHI Process, Experience and Management

The experience of members with CBHI was assessed based on the understanding of affiliates on what they experience in visiting the hospital. The views that CBHI affiliates have about health services use. It was assessed by using nine questions developed from different previous literatures in the field.[14], [27-30]

4.8 Data collection Tools

Data were collected using a structured questionnaire adapted from similar studies. The tool was prepared in English language and later translated into the local languages (Amharic and Afan-Oromo) since these languages are most widely spoken in the study area. Then it was translated back into English to ensure the validity of the questions. Under the careful supervision of the main investigator, two trained nurses gather information from respondents via kobo toolbox, a validated open-source platform designed for data collection. The questionnaire includes four sections with questions related to; socio-demographic characteristics of the respondents; CBHI process, Experience and management related; Health service provision related and those related to the satisfaction level of CBHI members. For items related to satisfaction on CBHI, a five point likert scale ordinary response was used to assess the level of client satisfaction.

4.9 Data Quality Management

Ahead of the actual data collection to monitor consistency, the protocol of the study tool and client’s confidentiality, namely, pre-test, training and reliability test (Cronbach’s alpha), were performed. The questionnaire was pretested on 5% (20 clients) of CBHI enrolees at Bishoftu General Hospital. In addition the data collection tool also ensures real-time data quality through built-in validation checks, skip patterns and consistency controls minimizing entry errors.

4.10 Data Processing and Management

The collected data was rigorously checked for completeness and cleaned, then exported to the Statistical Package for the Social Sciences (SPSS) version 27.0 for statistical analysis.

4.11 Statistical Analysis

Descriptive analysis was used to summarize findings, and binary logistic regression was conducted to assess associations. Multicollinearity was checked with variance inflation factor (VIF), showing no issues. The model fit was confirmed with the Hosmer–Lemeshow test ($p=0.810$). Statistical significance was set at $p < 0.05$ with a 95% CI.

4.12 Ethical consideration

Ethical clearance was obtained from Ethical Review Committee of Arsi University with protocol number A/CHS/RC/174/2025. The participants were informed about the purpose, benefit and confidentiality issues of the study and oral consent was obtained from each study participant prior to conducting the interview.

4.13 Dissemination plan

The findings of this research will be submitted to graduate programs coordinating office and College of Health Sciences of Arsi University, Asella Teaching and Referral Hospital. The findings will be disseminated accordingly to the relevant bodies. These will include Ministry of health, Oromia health bureau CBHI directorate, Ethiopian health insurance agency and Asella town health bureau. In collaboration with the respective woreda health bureaus, efforts will be made to reach to CBHI members and the community. Besides this, efforts will also be made to publish the research finding on reputable national and international journals like BMC health service research journals.

CHAPTER 5

RESULT

5.1 Socio-Demographic Characteristics

All 402 planned participants took part in the study, resulting in a 100% response rate. The mean age of the respondents was 47.05 (± 17.23 SD) years; whereas their age ranged from 18 to 86 years and 306 (76.1%) were married. Among the participants 216 (53.7%) were female. Half of the participants 207 (51.5%) are Muslim in their religion. The family size of the participants varied from 1 to 15, with a mean of 5.37 ± 2.547 . Additionally, 214 (53.2%) of the participants were from rural areas (Table 1). Most of the participants (220, 54.7%) had no formal education (Figure 2). Only few of the respondents came from distant area 29 (7.2%) (Figure 3).

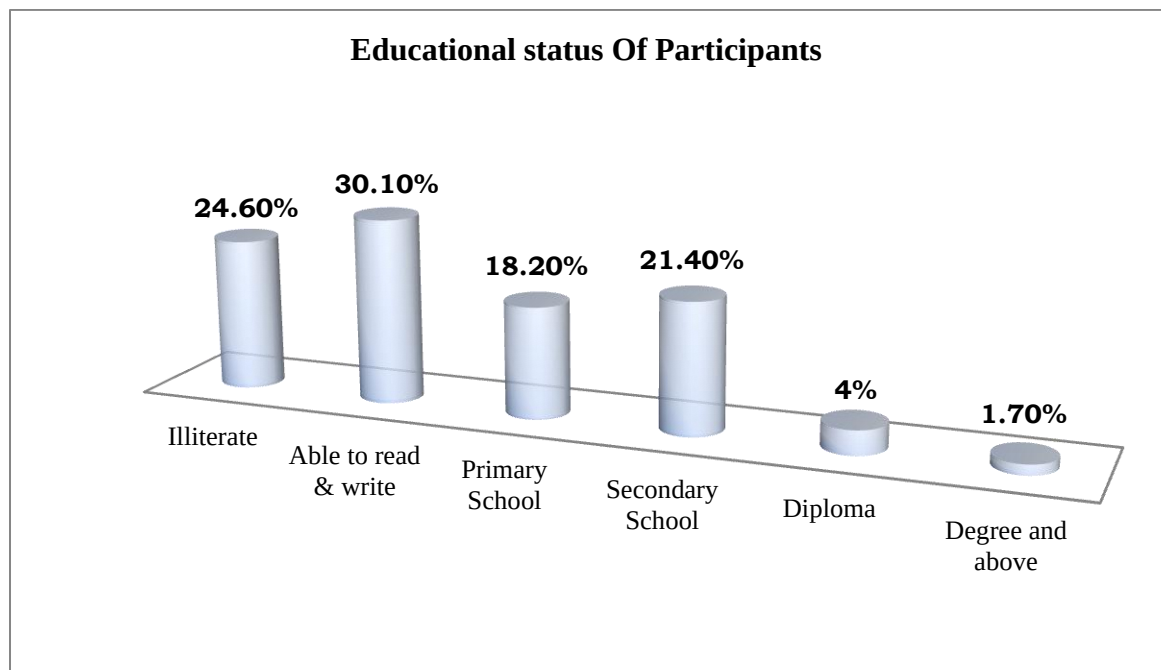


Figure 2: Educational Status of participants at ARTH, Arsi, Ethiopia 2025 ($n = 402$)

Table 1: Socio-demographic Characteristics of CBHI scheme Enrolled Clients who visit ARTH, Arsi Zone, Ethiopia 2025 ($n = 402$)

Variable	Category	Frequency	Percentage
Age of the participant	18 - 29 year	78	19.4
	30 - 44 year	89	22.1
	45 - 59 year	125	31.1
	60 year and above	110	27.4
Sex	Male	186	46.3
	Female	216	53.7
Marital Status	Single	58	14.4
	Married	306	76.1
	Divorced	12	3.0
	Widowed	26	6.5
Number of Family members	1(Single)	3	0.7
	2 - 3 family members	99	24.6
	4 - 5 family members	150	37.3
	≥6 family members	150	37.3
Religion	Orthodox	145	36.1
	Muslim	207	51.5
	Protestant	47	11.7
	Catholic	3	0.7
Occupation	Farmer	211	52.5
	Self employed	130	32.3
	Private employed	26	6.5
	Government Employed	7	1.7
	Other	28	7.0
Residence	Urban	188	46.8
	Rural	214	53.2

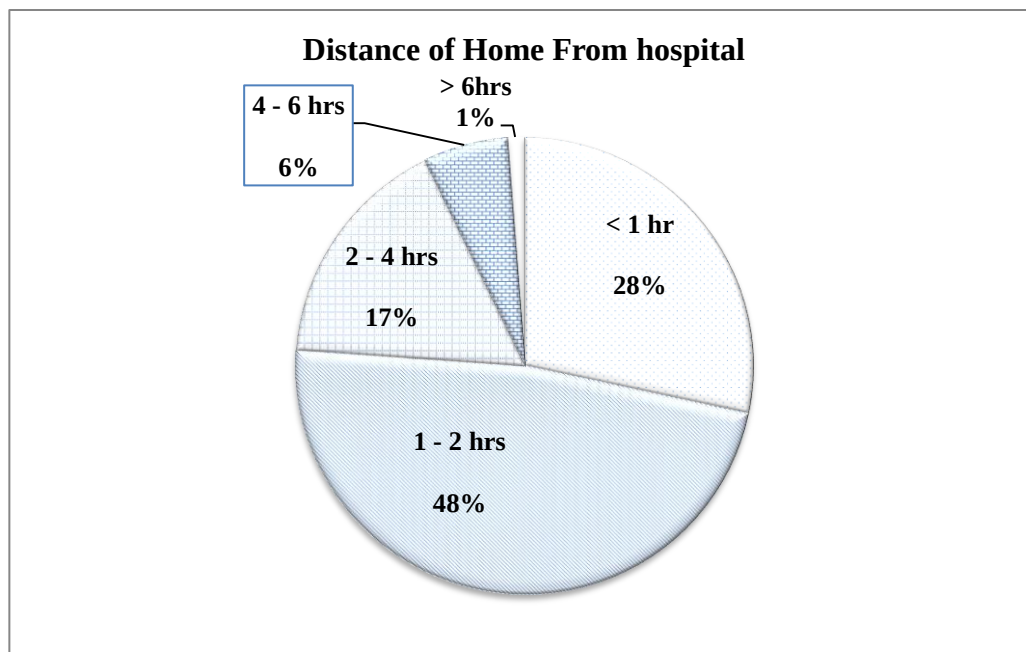


Figure 3: Distance of residency from Hospital (Hrs) of participants at ARTH, Arsi, Ethiopia 2025 ($n = 402$)

5.2 CHBI Process, Experience and management related factors

Most of the participants have a plan to renew their membership and also prefer to use this hospital for the future 399 (99.3%). Also 394 (98%) patients are happy with CBHI office opening hour. Of study participants 33.8 % (136) had never participated on meetings related to CBHI. Many of participants also know that the premium should be paid whether or not they got health care service in the previous year 378 (94%) (Table 2).

The mean year of enrolment of the study participants under CBHI scheme is 3.48 years (ranging from 1 to 10 years of enrolment) with (SD of ± 1.51) years. The mean number of visit of participants to the hospital is 5 times (SD of ± 3.24) while the minimum and maximum number of visit is once and twelve times respectively.

Table 2: Knowledge and experience of participants (CBHI scheme enrolled Clients) about the process & management of the CBHI scheme at ARTH, Arsi, Ethiopia 2025 (*n* = 402)

Variables	Response Category		
	Yes N (%)	No N (%)	Total N
Are you happy with CBHI offices opening time?	394(98.0)	8(2.0)	402
Do you have a plan to renew your memberships?	399(99.3)	3(0.7)	402
Have you ever participated on CBHI related meetings?	266(66.2)	136(33.8)	402
Can an individual, excluding family members Be a part of CBHI scheme?	28(7.0)	374(93.0)	402
Is membership fee paid every time you want to renew your membership?	394(98.0)	8(2.0)	402
Do members need to pay premium if they did not use health care in the previous year?	378(94.0)	24(6.0)	402
Do you prefer to use this hospital for future?	399(99.3)	3(0.7)	402

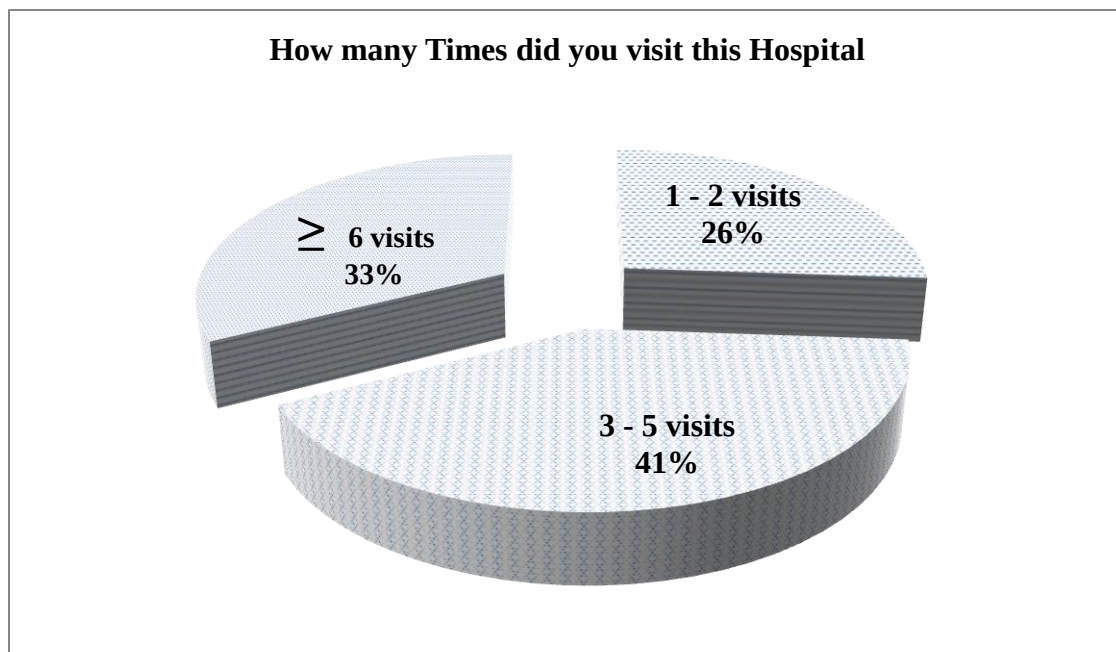


Figure 4: Number of times participants visit the hospital at ARTH, Arsi, Ethiopia 2025 ($n = 402$)

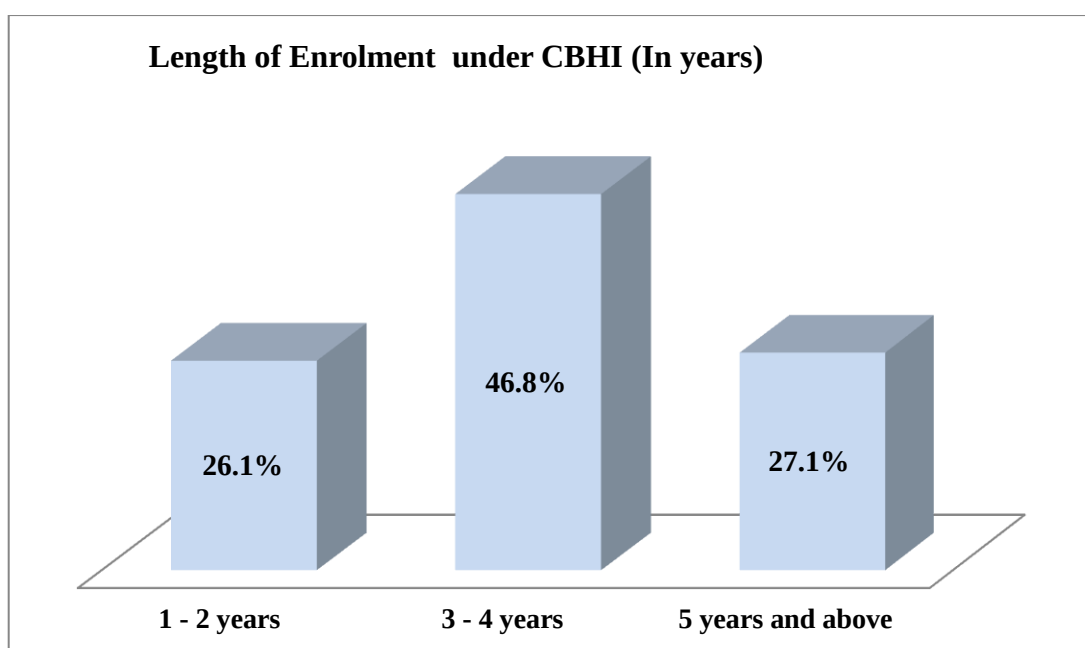


Figure 5: Length(year) of enrolment under CBHI of participants at ARTH, Arsi, Ethiopia 2025 ($n = 402$)

5.3 Health service provision experience of participants

Most of the participants 392 (97.5%) agree that the hospital is clean. More than two third of the participants 274 (68.2%) agree that they got the requested imaging service in the hospital, while more than 2/3 of participant did not get all prescribed drugs(69.2%) and requested lab investigation (71.4%) in the hospital respectively. Many 345 (85.8%) of participants said that they got immediate care while visiting the hospital. Most of participants 389 (96.8%) agree that health care providers are respecting them and 384 (95.5%) agree that they are friendly. Additionally, 318(79.1%) of participants thought that the hospital has adequate medical equipment's. Also most 390 (97%) of them thought that there are adequate qualified health professionals in the hospital (Table 3).

Table 3: Health service provision-related characteristics of CBHI scheme enrolled Clients who visit ARTH, Arsi Zone, Ethiopia 2025 (*n* = 402)

Variables	Response Category	Frequency	Percentage
Did you agree hospital environment is Clean?	Yes	392	97.5%
	No	10	2.5%
During your visit to this Hospital, did sick family members (you) receive all the prescribed drugs?	Yes	124	30.8%
	No	278	69.2%
During your visit to this Hospital; did sick family members (you) received all the requested laboratory services?	Yes	115	28.6%
	No	287	71.4%
During your visit to this Hospital; did sick family members (you) received all the requested Imaging services?	Yes	274	68.2%
	No	128	31.8%
Have you got immediate care when visiting hospital?	Yes	345	85.8%
	No	57	14.2%
Health care service providers were respecting you?	Yes	389	96.8%
	No	13	3.2%
Health care providers were friendly?	Yes	384	95.5%
	No	18	4.5%
Do you think that this hospital has adequate medical equipment's?	Yes	318	79.1%
	No	84	20.9%
Do you think this hospital has adequate qualified health practitioners?	Yes	390	97.0%
	No	12	3.0%

5.4 Level of Satisfaction with CBHI scheme

The overall level of client mean satisfaction score toward health service provision was 3.84 ($\pm$ 0.59 SD). Participants respond with the highest satisfaction rate for recommending others to become member of CBHI scheme with an average score of 4.47 ($\pm$ 0.54 SD), and suitability of opening hour of CBHI office to get service with mean satisfaction rate of 4.17 ($\pm$ 1.03 SD). On the other hand, participants reported poor satisfaction with extra fee they paid from their pocket for service, medication or investigations which are not available 2.90 ($\pm$ 1.32 SD). The overall level of client (percentage mean score) satisfaction with CBHI was 75.9% (Table 4).

Table 4 Satisfaction level of CBHI members on health service provision, who visit ARTH,

Arsi Zone, Ethiopia 2025 ($n = 402$)

Variables	Likert Scale	Satisfaction Level		Total	Mean Satisfaction Score $\pm$ SD
		Not Satisfied N (%)	Satisfied N (%)		
Opening hours of CBHI office are suitable	Strongly Disagree	21(5.2)	0(0.0)	21(5.2)	4.17 $\pm$ 1.03
	Disagree	4(1.0)	0(0.0)	4(1.0)	
	Neutral	19(4.7)	26(6.5)	45(11.2)	
	Agree	41(10.2)	106(26.4)	147(36.6)	
	Strongly Agree	12(3)	173(43.0)	185(46.0)	
Gap between card dispensing and use is appropriate	Strongly Disagree	12(3.0)	5(1.2)	17(4.2)	3.78 $\pm$ 1.04
	Disagree	10(2.5)	19(4.7)	29(7.2)	
	Neutral	23(5.7)	58(14.4)	81(20.1)	
	Agree	42(10.4)	131(32.6)	173(43.0)	
	Strongly Agree	10(2.5)	92(22.9)	102(25.4)	
Fee payment time for membership is suitable	Strongly Disagree	5(1.2)	2(0.5)	7(1.7)	4.05 $\pm$ 0.8
	Disagree	9(2.2)	4(1.0)	13(3.2)	
	Neutral	18(4.5)	23(5.7)	41(10.2)	
	Agree	54(13.4)	180(44.8)	234(58.2)	
	Strongly Agree	11(2.7)	96(23.9)	107(26.6)	

Table 4 continued

Variables	Likert Scale	Satisfaction Level		Total	Mean Satisfaction Score $\pm$ SD
		Not Satisfied N (%)	Satisfied N (%)		
CBHI management is trustworthy	Strongly Disagree	33(8.2)	0(0.0)	33(8.2)	3.71 $\pm$ 1.15
	Disagree	15(3.7)	12(3.0)	27(6.7)	
	Neutral	29(7.2)	31(7.7)	60(14.9)	
	Agree	19(4.7)	168(41.8)	187(46.5)	
	Strongly Agree	1(0.2)	94(23.4)	95(23.6)	
Enough information is provided about CBHI	Strongly Disagree	11(2.7)	0(0.0)	11(2.7)	3.79 $\pm$ 0.92
	Disagree	23(5.7)	5(1.2)	28(7.0)	
	Neutral	29(7.2)	43(10.7)	72(17.9)	
	Agree	33(8.2)	181(45.0)	214(53.2)	
	Strongly Agree	1(0.2)	76(18.9)	77(19.2)	
Service package provided is enough	Strongly Disagree	6(1.5)	0(0.0)	6(1.5)	3.87 $\pm$ 0.91
	Disagree	25(6.2)	10(2.5)	35(8.7)	
	Neutral	25(6.2)	30(7.5)	55(13.7)	
	Agree	41(10.2)	173(43.0)	214(53.2)	
	Strongly Agree	0(0.0)	92(22.9)	92(22.9)	
Happy with facilities and referral process	Strongly Disagree	10(2.5)	4(1.0)	14(3.5)	3.95 $\pm$ 0.94
	Disagree	17(4.2)	1(0.2)	18(4.5)	
	Neutral	27(6.7)	22(5.5)	49(12.2)	
	Agree	36(9.0)	179(44.5)	215(53.5)	
	Strongly Agree	7(1.7)	99(24.6)	106(26.4)	
Extra fee paid from pocket for unavailable services	Strongly Disagree	34(8.5)	26(6.5)	60(14.9)	2.90 $\pm$ 1.32
	Disagree	48(11.9)	80(19.9)	128(31.8)	
	Neutral	5(1.2)	67(16.7)	72(17.9)	
	Agree	10(2.5)	67(16.7)	77(19.2)	
	Strongly Agree	0(0.0)	65(16.2)	65(16.2)	
Community can voice claims on bad services	Strongly Disagree	7(1.7)	0(0.0)	7(1.7)	3.72 $\pm$ 0.90
	Disagree	14(3.5)	12(3.0)	26(6.5)	
	Neutral	51(12.7)	65(16.2)	116(28.9)	
	Agree	19(4.7)	157(39.1)	176(43.8)	
	Strongly Agree	6(1.5)	71(17.7)	77(19.2)	
Would you recommend others to join CBHI	Disagree	1(0.2)	0(0.0)	1(0.2)	4.47 $\pm$ 0.54
	Neutral	6(1.5)	0(0.0)	6(1.5)	
	Agree	53(13.2)	146(36.3)	199(49.5)	
	Strongly Agree	37(9.2)	159(39.6)	196(48.8)	

5.5 Factors influencing satisfaction of CBHI enrolled clients

In the multivariable logistic regression analysis, factors positively associated with CBHI client satisfaction included longer duration of enrollment in the CBHI scheme, participation in CBHI-related meetings, and increasing age. After adjusting for potential confounders, clients who had been enrolled in the scheme for a longer period and those who actively participated in CBHI meetings were more likely to report satisfaction with healthcare services. Older age groups also demonstrated higher levels of satisfaction compared to younger clients. Other variables that showed an association in the bivariate analysis did not remain significant independent predictors in the final model.

However, Clients aged 18 – 29 years were 67% less likely to be satisfied compared to those aged ≥ 60 years (AOR = 0.33; 95% CI: 0.12 – 0.90; $p = 0.032$), clients aged 30 – 44 years were also less likely to be satisfied compared to those ≥ 60 years (AOR = 0.38; 95% CI: 0.15 – 0.95; $p = 0.039$). Correspondingly Being illiterate significantly increased satisfaction (AOR = 10.07; 95% CI: 0.96 – 106.00; $p = 0.043$) compared to clients with degree and above.

Clients who could read and write (AOR = 24.45; 95% CI: 2.42 – 247.55; $p = 0.007$), those with primary education (AOR = 25.94; 95% CI: 2.49 – 269.64; $p = 0.006$), and those with secondary education (AOR = 30.28; 95% CI: 2.97 – 308.52; $p = 0.004$) had significantly higher odds of satisfaction compared to clients with degree and above. Although the confidence intervals were wide, likely due to small numbers in the reference category, the associations remained statistically significant. Participants enrolled 1 – 2 years in the scheme were 56% less likely to be satisfied compared to those enrolled ≥ 5 years (AOR = 0.44; 95% CI: 0.19 – 0.99; $p = 0.049$).

Longer enrollment showed higher satisfaction, though 3 – 4 years was not significant. Clients who attended CBHI meetings were 70% more likely to be satisfied than those who did not (AOR = 1.70; 95% CI: 1.00 – 2.91; $p = 0.049$) (Table 5).

Table 5: Bivariate and Multivariate logistic regression analysis results on factors associated with CBHI client satisfaction at ARTH, Arsi Zone, Ethiopia 2025 (n=402)

Variables		Satisfaction Level		COR(95%CI)	AOR(95%CI)	P- value
		Satisfied	Not satisfied			
		N (%)	N (%)			
Age (years)	18 - 29 yrs	45(57.7)	33(42.3)	0.25 (0.13 , 0.49)***	0.33(0.12 , 0.90)	0.032*
	30 - 44 yrs	61(68.5)	28(31.5)	0.40 (0.20 , 0.79)**	0.38 (0.15 , 0.95)	0.039*
	45 - 59 yrs	106(84.8)	19(15.2)	1.02 (0.50 , 2.08)	0.88 (0.39 , 2.00)	0.767
	≥ 60 yrs	93(84.5)	17(15.5)	1	1	
Marital Status	Single	33(56.9)	25(43.1)	0.47(0.18 , 1.34)	1.16 (0.32 , 4.19)	0.826
	Married	243(79.4)	63(20.6)	1.42(0.57 , 3.53)	2.32 (0.80 , 6.69)	0.12
	Divorced	10(83.3)	2(16.7)	1.84(0.32 , 10.58)	2.37 (0.35 , 16.12)	0.377
	Widowed	19(73.1)	7(26.8)	1	1	
Educational status	Cannot read & write	76(76.8)	23(23.2)	11.43(1.08 , 121.04)**	10.07 (0.96 , 106.00)	0.043*
	Able to read & write	99(81.8)	22(18.2)	27.00 (3.09 , 235.72)**	24.45 (2.42 , 247.55)	0.007**
	Primary School	55(75.3)	18(24.7)	18.33 (2.07 , 162.65)**	25.94 (2.49 , 269.64)	0.006**
	Secondary School	65(75.6)	21(24.4)	18.57 (2.11 , 163.21)**	30.28 (2.97 , 308.52)	0.004**
	Diploma	9(56.3)	7(43.8)	7.71 (0.75 , 79.77)	8.8 (0.73 , 106.69)	0.088
	Degree and above	1(14.3)	6(85.7)	1	1	
Place of Residency	Urban	134(71.3)	54(28.7)	0.62 (0.39 , 0.99)*	0.93 (0.52 , 1.65)	0.801
	Rural	171(79.9)	43(20.1)	1	1	
Length of enrolment Under CBHI	1 - 2 years	64(61.0)	41(39.0)	0.25 (0.13 , 0.49)***	0.44 (0.19 , 0.99)	0.049*
Scheme (In years)	3 - 4 years	147(78.2)	41(21.8)	0.57(0.30 , 1.09)	0.75 (0.36 , 1.56)	0.438
	≥5 years	94(86.2)	15(13.8)	1	1	
Are you happy with CBHI offices opening time?	Yes	301(76.4)	93(23.6)	3.24(0.79 , 13.19)	1.49 (0.24 , 9.05)	0.667
	No	4(50)	4(50)	1		
Number of Hospital visit	1 - 2 visits	71(67.6)	34(32.4)	0.52 (0.29 , 0.94)*	1.11 (0.54 , 2.29)	0.769
	3 - 5 visits	129(77.7)	37(22.3)	0.86 (0.49 , 1.52)	1.12 (0.58 , 2.17)	0.727
	≥6 visits	105(80.2)	26(19.8)	1	1	
Participation on CBHI related meetings	Yes	214(80.5)	52(19.5)	2.04 (1.27 , 3.25)**	1.70 (1.00 , 2.91)	0.049*
	No	91(66.9)	45(33.1)	1	1	
Got all the prescribed drugs in the Hospital?	Yes	110(84.6)	20(15.4)	2.17 (1.26 , 3.74)**	1.86 (0.96 , 3.60)	0.064
	No	195(71.7)	77(28.3)	1	1	
Got all the requested laboratory investigations in the Hospital?	Yes	99(86.1)	16(13.9)	2.43 (1.35 , 4.38)**	1.28 (0.64 , 2.58)	0.487
	No	206(71.8)	81(28.2)	1	1	

(*) P-value < 0.05, (**) P-value < 0.01, (***) P-value < 0.001. AOR = Adjusted odd ratio, COR = Crude odd ratio, N=Number, P= Percentage

CHAPTER 6

DISCUSSION

Although the overall satisfaction level (75.9%) was moderately high and consistent with ranges reported in other studies, this does not necessarily contradict the observed service gaps. Research shows that in low and middle income settings, patient satisfaction often reflects how well services meet clients' expectations and perceived needs, particularly regarding interpersonal care and financial aspects, rather than absolute technical completeness of services. Satisfaction tends to remain high when providers are courteous, respectful, and responsive, even when objective deficits such as stock-outs or diagnostic limitations exist. This phenomenon has been documented in multiple studies in Ethiopia and similar contexts, where satisfaction is shaped by the alignment between actual experience and client expectations rather than technical quality alone.[\[40\]](#)

Globally, studies assessing client satisfaction with health insurance schemes and facility based services report wide variability, reflecting differences in health system capacity, benefit packages, and study methodologies. Facility based exit interviews frequently yield higher satisfaction estimates than community or household surveys, as they capture immediate care experiences and may be influenced by courtesy and recall biases. In contrast, household based studies often report lower pooled satisfaction levels because they incorporate longer term experiences, unmet needs, and perceptions of households that may not have recently accessed services. This methodological heterogeneity explains much of the variation observed across international studies.

Within Africa, systematic reviews and meta-analyses similarly demonstrate substantial heterogeneity in satisfaction levels across settings and countries. Pooled estimates from household based studies generally report moderate satisfaction levels, with a study done by Worede and Bayked, documenting pooled CBHI satisfaction estimates of approximately 62% (95% CI: 53.3 – 71.2). These findings suggest that while CBHI schemes contribute positively to perceived access and financial protection, satisfaction remains uneven and highly context dependent across the region, influenced by service availability, benefit design, and implementation fidelity.[\[15\]](#), [\[22\]](#)

At the national and local level in Ethiopia, institution based studies tend to report satisfaction levels comparable to or slightly higher than the present finding of 75.9%. For example, Hailie

reported an overall satisfaction level of approximately 80% among CBHI clients at Boru Meda Hospital, while Babore found relatively higher perceived satisfaction compared with earlier regional studies, though with notable variation across subgroups such as urban and rural residents.[12], [14] The higher satisfaction observed in facility based studies compared with pooled household estimates likely reflect differences in study design, timing of data collection, and measurement approaches. Nonetheless, exceptionally high satisfaction has also been reported in some household surveys, such as the study by Badacho, which documented satisfaction levels exceeding 90% in a specific context, further underscoring regional and methodological variability.[28]

Regarding associated factors, the finding that younger clients (18 – 29 and 30 – 44 years) were significantly less satisfied than older adults (≥ 60 years) aligns with evidence from Ethiopia and similar low resource settings. Multiple studies have shown that older patients often report higher satisfaction, potentially due to lower expectations, greater tolerance of service limitations, or more deferential attitudes toward healthcare providers, whereas younger clients tend to have higher expectations regarding timeliness, communication, and service quality.[12], [14] This pattern is further supported by Mohammed, who identified age as a key determinant of satisfaction among CBHI beneficiaries with chronic conditions and noted that factors such as waiting time and service components mediate the observed age related differences in satisfaction.[27]

This may be explained as the study area include differing expectations by age group, differential prior exposure to alternative (private or higher level) services among younger and more mobile populations, and varying communication preferences (younger clients may expect faster, more modern communication and customer service). Programmatically, these findings suggest the need for age responsive communication and service improvement strategies (for example, more efficient triage and youth friendly service arrangements).[40], [43-45]

Lower educational attainment (cannot read & write; able to read & write; primary and secondary education) was associated with substantially higher odds of satisfaction compared with degree holders in our model. This inverse relationship between education and satisfaction has been repeatedly observed in Ethiopia and elsewhere: more educated clients tend to report lower satisfaction because they have higher expectations, are more critical of quality and process issues, and may compare public services with higher tier private or urban services.[14], [31]

Notably, the magnitudes of the adjusted odds ratios for education in our analysis are large; this may partially reflect a small reference group (degree and above), sample-size effects, or contextual factors in which degree holders have access to different information channels and higher expectations. The wide confidence intervals observed for educational status may be attributed to the small number of participants in the degree and above category, which reduced the precision of the estimated odds ratios. Despite this limitation, the associations remained statistically significant and consistent in direction, suggesting a true underlying relationship between educational status and client satisfaction. Similar but generally smaller effect sizes are reported in national and regional analyses. [31]

Clients enrolled for ≥ 5 year were significantly more likely to be satisfied. The positive effect of longer enrollment, indicating growing trust and familiarity, is supported by the findings of Alemu. [31] More importantly, the strong positive association with meeting participation is a crucial and consistent finding. It echoes the work of Babore and Mohammed, who highlighted the role of client provider communication and health education in enhancing satisfaction.[14], [27] Also it is consistent with studies showing that active community engagement, awareness raising and clear information about entitlements increase trust and satisfaction with insurance schemes.[15], [30] Engaged members understand scheme rules better, are less likely to be surprised by service limitations, and have clearer channels for feedback and grievances all of which plausibly raise satisfaction and retention.

Strength and Limitation

This study has several important strengths. Few investigations have examined client satisfaction within the CBHI context in Ethiopia, and none had been conducted in the study area; therefore, the current findings provide valuable baseline evidence that can inform future research and policy development. The use of multivariate logistic regression allowed for control of potential confounders, enabling more accurate identification of independent predictors of satisfaction. Additionally, the study employed a reliable measurement tool, as evidenced by the client satisfaction scale demonstrating good internal consistency, which strengthens the credibility of the results.

Limitation

This study has several limitations. Its cross-sectional design prevents establishing causal relationships between the identified predictors and client satisfaction, as data were collected at a single point in time. Social desirability bias may also have influenced responses, with some client's potentially over reporting satisfaction due to interviewer presence or fear of jeopardizing their care. Because the study was conducted in a single referral and teaching hospital, the findings may not be generalizable to other facilities or regions. In addition, certain satisfaction-related questions required participants to recall previous service experiences, which may introduce recall bias. The study had a small number of respondents in some categories, particularly among highly educated participants, which may have resulted in wide confidence intervals and reduced precision of effect estimates. Finally, some potentially important confounding factors such as provider workload, objective waiting time measurements, and clinical outcomes were not assessed and may have influenced clients' satisfaction levels

Conclusion and Recommendations

Overall, the findings demonstrate that client satisfaction in CBHI settings is multifactorial, influenced strongly by socio-demographic characteristics (age, education) and by program engagement (meeting participation, enrolment duration). This study affirms that clients at Asella Referral and Teaching Hospital are generally satisfied with the CBHI scheme, a finding consistent with the broader Ethiopian experience. However, this overall satisfaction masks significant dissatisfaction with critical service delivery components, particularly drug and diagnostic availability. The predictors of satisfaction; age, education, scheme tenure, and engagement highlight that client experience is not uniform. Moving forward, strengthening core medical service delivery while strategically engaging different client segments through communication and participatory forums will be essential to transform high renewal rates into genuinely high-quality, equitable healthcare access under the CBHI scheme.

Recommendations

For Asella Referral and Teaching Hospital

- Improve communication between healthcare providers and clients, especially for younger and more educated clients who express higher expectations.
- Strengthen the consistent availability of essential drugs and laboratory services to build trust and reduce dissatisfaction.
- Implement client feedback mechanisms (e.g., suggestion boxes, exit interviews) to identify and address service gaps promptly.
- Provide periodic refreshment training for staff on respectful care, timely service, and patient-centered communication.

For Oromia Health Bureau, Arsi Zonal Health Bureau, Asella Town & Woreda health Bureaus and CBHI Coordination Office

- Intensify community sensitization and awareness programs to encourage participation in CBHI-related meetings, given its significant association with improved satisfaction.
- Strengthen information clarity on benefit packages, referral systems, and service entitlements to reduce misunderstandings and mismatched expectations.
- Monitor new enrollees closely during their first years to ensure positive experiences and enhance long-term satisfaction and retention.

For Ministry Of Health, Ethiopian Insurance Service, Oromia Health Bureau

- Invest in improving hospital service readiness, including staffing, drug supply systems, diagnostic capacity, and waiting time reduction strategies.
- Develop structured community engagement platforms to enhance trust, transparency, and uptake of CBHI services.
- Consider targeted interventions for demographic groups with lower satisfaction (e.g., younger and highly educated clients).
- Implement routine evaluations of client satisfaction as part of CBHI quality improvement and accountability frameworks.

CHAPTER 7

References

- [1] “The World Health Report HEALTH SYSTEMS FINANCING”.
- [2] *Tracking Universal Health Coverage: 2023 Global Monitoring Report*. 2023. doi: 10.1596/40348.
- [3] United Nations, “Universal Health Coverage | General Assembly of the United Nations.” Accessed: Feb. 05, 2025. [Online]. Available: <https://www.un.org/pga/73/event/universal-health-coverage/>
- [4] M. E. Kruk *et al.*, “The Lancet Global Health Commission High-quality health systems in the Sustainable Development Goals era : time for a revolution,” vol. 6, no. November, pp. 1196–1252, 2018, doi: 10.1016/S2214-109X(18)30386-3.
- [5] O. Indicators, *Health at a Glance 2021*. 2021.
- [6] M. R. Reich *et al.*, “Moving towards universal health coverage : lessons from 11 country studies,” *Lancet*, vol. 387, no. 10020, pp. 811–816, 2016, doi: 10.1016/S0140-6736(15)60002-2.
- [7] “Methodology for the update of the Global Health Expenditure Database ,” no. December, pp. 2000–2018, 2020.
- [8] Results For Development, “Health Financing | Results for Development.” Accessed: Feb. 05, 2025. [Online]. Available: <https://r4d.org/health/health-financing/>
- [9] I. A. O. Odeyemi and J. Nixon, “Assessing equity in health care through the national health insurance schemes of Nigeria and Ghana : a review-based comparative analysis,” pp. 1–18, 2013.
- [10] T. Government, S. Protection, and F. Recommendation, “Progress towards Universal Health Coverage,” pp. 1–6, 2012.
- [11] “Health Investments within a Constrained Economy 2021/22,” 2021.
- [12] M. T. Hailie, S. L. Hassen, and M. M. Temesgen, “Client satisfaction on community based health insurance scheme and associated factors at Boru Meda Hospital , Northeast , Ethiopia : institutional based cross-sectional study,” pp. 1–8, 2021.
- [13] B. Belayihun *et al.*, “The interaction of healthcare service quality and community-based health insurance in Ethiopia,” pp. 1–16, 2021, doi: 10.1371/journal.pone.0256132.
- [14] G. O. Babore, T. M. Ashine, A. Z. Heliso, and T. T. Habebo, “Client satisfaction and associated factors towards the health service provided to members of a community-based health insurance scheme in Southern Ethiopia,” *Front. Heal. Serv.*, vol. 3, no. November, pp. 1–10, 2023, doi: 10.3389/frhs.2023.1237895.
- [15] E. M. Bayked, H. N. Toleha, S. Zewdie, and A. M. Mekonen, “Beneficiaries ’ satisfaction with community- based health insurance services and associated factors in Ethiopia : a systematic review and meta-analysis,” vol. 4, 2024.

- [16] S. Ahmed *et al.*, *Effectiveness of health voucher scheme and micro-health insurance scheme to support the poor and extreme poor in selected urban areas of Bangladesh: An assessment using a mixed-method approach*, vol. 16, no. November. 2021. doi: 10.1371/journal.pone.0256067.
- [17] S. U. and K. T. Collins D, “The Impact of Community-Based Health Insurance on Access to Care and Equity in Rwanda,” 2016.
- [18] D. R. Terefa, E. T. Geta, and A. T. Shama, “What role does community- - based health insurance play in the utilisation of health services among households in Ethiopia ? A community- - based comparative cross- - sectional study,” pp. 1–11, 2024, doi: 10.1136/bmjopen-2023-078733.
- [19] Y. K. Alemayehu *et al.*, “The impact of community - based health insurance on health service utilization and financial risk protection in Ethiopia,” *BMC Health Serv. Res.*, pp. 1–13, 2023, doi: 10.1186/s12913-022-09019-6.
- [20] E. M. Bayked, H. N. Toleha, S. Z. Kebede, B. D. Workneh, and M. H. Kahissay, “The impact of community-based health insurance on universal health coverage in Ethiopia: a systematic review and meta-analysis,” *Glob. Health Action*, vol. 16, no. 1, 2023, doi: 10.1080/16549716.2023.2189764.
- [21] D. Birhan, Z. Aderaw, E. Agdew, and M. Siferih, “Satisfaction of chronic patients with community-based health insurance schemes and related factors: Explanatory sequential mixed methods study,” *PLOS Glob. Public Heal.*, vol. 4, no. 8, pp. 1–16, 2024, doi: 10.1371/journal.pgph.0003374.
- [22] D. T. Worede, M. K. Tariku, and M. B. Asresie, “Household satisfaction and associated factors with community - based health insurance scheme in Ethiopia : systematic review and meta - analysis,” *Glob. Heal. Res. Policy*, 2023, doi: 10.1186/s41256-023-00325-y.
- [23] Y. Abebe and F. Belayneh, “Determinants of willingness to pay for community-based health insurance scheme among households in rural community of southern Ethiopia,” *BMC Health Serv. Res.*, vol. 23, no. 1, pp. 1–10, 2023, doi: 10.1186/s12913-023-10406-w.
- [24] EHIS, “Ethiopian health insurance service strategic plan,” 2020. Accessed: Feb. 05, 2025. [Online]. Available: <https://ehis.gov.et/>
- [25] A. D. Mebratie, R. Sparrow, Z. Yilma, D. Abebaw, G. Alemu, and A. S. Bedi, “The impact of Ethiopia’s pilot community based health insurance scheme on healthcare utilization and cost of care,” *Soc. Sci. Med.*, vol. 220, pp. 112–119, 2019, doi: 10.1016/j.socscimed.2018.11.003.
- [26] B. Girma, F., Jira, C., & Girma, “Service quality and satisfaction in Ethiopian CBHI schemes,” *Ethiop. J. Heal. Dev.*, vol. 35(2), pp. 112–120, 2021.
- [27] Y. Mohammed, S. Birhanu, K. Abdu, N. Ahmed, and S. Letta, “Determinants of satisfaction with community-based health insurance schemes among beneficiaries with chronic diseases in selected public hospitals in Eastern Ethiopia : A multicenter study,” 2024, doi: 10.1177/20503121241284170.

- [28] A. S. Badacho, K. Tushune, Y. Ejigu, and T. M. Berheto, "Household satisfaction with a community - based health insurance scheme in Ethiopia," *BMC Res. Notes*, pp. 1–10, 2016, doi: 10.1186/s13104-016-2226-9.
- [29] B. A. Balcha and M. Endeshaw, "Household satisfaction with a pilot community-based health insurance scheme and associated factors in Addis Ababa," 2023, doi: 10.1177/22799036231163382.
- [30] A. K. Sendekie, A. H. Gebremichael, and M. W. Tadesse, "Enrollment and clients ' satisfaction with a community - based health insurance scheme : a community - based survey in Northwest Ethiopia," *BMC Health Serv. Res.*, vol. 7, pp. 1–11, 2024, doi: 10.1186/s12913-024-10570-7.
- [31] B. Alemu, S., Abebe, L. & Kefale, "Client satisfaction with Community-Based Health Insurance in Ethiopia: A nationwide study.," *BMC Heal. Serv. Res.* 22, 45., 2022.
- [32] S. Teshome, A., Tsegaye, D., & Woldeyohannes, "Gaps in CBHI evaluation research: A systematic review.," *Ethiop. J. Health Sci.*, vol. 33(1), pp. 15–30, 2023.
- [33] W. H. Organization, "Universal health coverage," vol. 4, no. November, pp. 1–6, 2023.
- [34] "Universal Health Coverage | Results for Development." Accessed: Feb. 05, 2025. [Online]. Available: <https://r4d.org/health/universal-health-coverage/>
- [35] A. R. Meeting, H. Sector, S. H. Financing, and S. H. Development, "SPECIAL," no. November, 2023.
- [36] M. B. Degefa, B. T. Woldehanna, and A. D. Mebratie, "Effect of community - based health insurance on catastrophic health expenditure among chronic disease patients in Asella referral hospital , Southeast Ethiopia : a comparative cross - sectional study," *BMC Health Serv. Res.*, pp. 1–8, 2023, doi: 10.1186/s12913-023-09181-5.
- [37] S. Mohammed, M. N. Sambo, and H. Dong, "Understanding client satisfaction with a health insurance scheme in Nigeria : factors and enrollees experiences," pp. 1–8, 2011.
- [38] A. P. Fenny, U. Enemark, F. A. Asante, and K. S. Hansen, "Patient Satisfaction with Primary Health Care – A Comparison between the Insured and Non-Insured under the National Health Insurance Policy in Ghana," vol. 6, no. 4, pp. 9–21, 2014, doi: 10.5539/gjhs.v6n4p9.
- [39] A. R. Sarker, M. Sultana, and S. Ahmed, "Clients ' Experience and Satisfaction of Utilizing Healthcare Services in a Community Based Health Insurance Program in Bangladesh", doi: 10.3390/ijerph15081637.
- [40] H. Biresaw, H. Mulugeta, A. Endalamaw, N. N. Yesuf, and Y. Alemu, "Patient satisfaction towards health care services provided in Ethiopian health institutions : a systematic review and meta-analysis," 2021, doi: 10.1177/11786329211040689.
- [41] A. Dametawe, E. Hailu, Z. Shewangizawe, and N. Nassir, "Satisfaction with Laboratory Services and Associated Factors Among Patients in Public Health Centers in Addis Ababa , Ethiopia," pp. 1–12, 2023, doi: 10.4172/2319-9865.12.3.008.

- [42] G. Tollera, M. T. Retta, and A. M. Girmay, "Patient satisfaction with healthcare services and associated factors at public health centers in Addis Ababa, Ethiopia," *Discov. Soc. Sci. Heal.*, vol. 5, no. 1, 2025, doi: 10.1007/s44155-025-00185-6.
- [43] C. K. Jaipaul and G. E. Rosenthal, "Are older patients more satisfied with hospital care than younger patients?," *J. Gen. Intern. Med.*, vol. 18, no. 1, pp. 23–30, 2003, doi: 10.1046/j.1525-1497.2003.20114.x.
- [44] M. S. Alhasan *et al.*, "Determinants of patient satisfaction among outpatients with chronic illnesses in the region of medina, Saudi Arabia: a cross-sectional study," *BMC Health Serv. Res.*, vol. 25, no. 1, 2025, doi: 10.1186/s12913-025-13116-7.
- [45] M. A. Clarke, A. L. Fruhling, M. Sitorius, T. A. Windle, T. L. Bernard, and J. R. Windle, "Impact of age on patients' communication and technology preferences in the era of meaningful use: Mixed methods study," *J. Med. Internet Res.*, vol. 22, no. 6, pp. 1–14, 2020, doi: 10.2196/13470.

ANNEXES

Annex I: Information sheet and Consent Form

Participant Information Sheet and Voluntary Consent (English Version)

My name is _____. I am working as data collector for the study being conducted in Hospital by Dr. Wondwosen Mulatu who is studying his Specialty In Internal Medicine at Arsi University College of Health Science and Medicine. I kindly request you to lend me your attention to explain to you about the study and why you are selected as the study participant.

The study title: Level of Satisfaction and Associated Factors Among Clients Enrolled In The Community Based Health Insurance Scheme At Asella Referral and Teaching Hospital
Purpose of the study: The findings of this study can be of a paramount importance for Asella Referral and Teaching Hospital in improvement of Health service provided for community based health insurance.

Procedure and duration: Questions will be provided to you by trained nurses. This questionnaire may take up to 20 minutes

Risks and benefits: You are not at any form of risk by participating in this study

Confidentiality: The data you will provide us will be confidential. There will be no information that will identify you. The findings of the study will be generalized for the study population and will not reflect anything particular of individual person. The questionnaire will be coded to exclude names. No reference will be made in oral or written reports that could link participants to the research.

Rights: Participation in this study is voluntary. You have the right to declare to participate or not in this study. If you decide to participate, you have the right to withdraw from the study at any time and this will not label you for any loss of benefit, which you otherwise are entitled. You do not have to answer any question that you do not want to answer.

We would appreciate your help in responding to these questions and we value your input to make this study a successful one.

Contact address: If there, are any questions or enquires any time about the study or the procedures, please contact me:

- Dr. Wondwosen Mulatu : Mobile number (+251)-910-994877
- Email Address: wondiemek04@gmail.com

Declaration of informed voluntary consent: I/It have read/was read to me the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues to confidentiality, the rights of participating and contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to stop the study at any time or not to answer any question that I do not want. Therefore, I declare my voluntary verbal consent to allow this study to be conducted.

Thank You!

Annex II: Questionnaire (English Version)

Number	Questions	Response	Skip	
Section: 1 Socio - Demographic characteristics				
101	How old are you? (Households)	_____ years (current age in years)		
102	What is your sex (Gender)?	1. Male 2. Female		
103	What is your current marital status?	1. Single 2. Married 3. Divorced 4. Widowed		
104	How many family members are there in your household?	_____ Members		
105	What is your current religion?	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other Specify (_____)		
106	What is your current educational status?	1. Illiterate 2. Able to read & write 3. Primary School 4. Secondary School 5. Diploma 6. Degree and above		
107	What is your occupation?	1. Agriculture 2. Self Employed 3. Private Employed 4. Government Employed 5. Other		

108	What is your occupation?	1. Agriculture 2. Self Employed		
-----	--------------------------	------------------------------------	--	--

Section: 2 CBHI process, Experience and management related factors

201	Length of enrolment Under CBHI Scheme?	_____ years		
202	Distance of your home from this hospital? (with Vehicle)	1. < 1hr 2. 1 -2 hr 3. 2 -4 hr 4. 4 -6 hr 5. > 6hr		
203	Are you happy with CBHI offices opening times?	1. Yes 2. No		
204	How many times did you visit this Hospital?	_____		
205	Have you plan to renew your memberships?	1. Yes 2. No		
206	Have you ever participated on CBHI related meetings?	1. Yes 2. No		
207	Can an individual, excluding family members be a part of CBHI scheme?	1. Yes 2. No		
208	Is membership fee paid every time you want to renew your membership?	1. Yes 2. No		
209	Do members need to pay premium if they did not use health care in the previous year?	1. Yes 2. No		
210	Do you prefer to use the hospital for future?	1. Yes 2. No		

Section: 3 Health service provision related questions				
301	Did you agree hospital environment is Clean?	1. Yes 2. No		
302	During your visit to this Hospital, did sick family members (you) receive all the prescribed drugs?	1. Yes 2. No		
303	During your visit to this Hospital; did sick family members (you) received all the requested laboratory services?	1. Yes 2. No		
304	During your visit to this Hospital; did sick family members (you) received all the requested Imaging services?	1. Yes 2. No		
305	Have you got immediate care when visiting this hospital?	1. Yes 2. No		
306	Health care service providers were respecting you?	1. Yes 2. No		
307	Health care providers were friendly	1. Yes 2. No		
308	Do you think that this hospital has adequate medical equipment's?	1. Yes 2. No		
309	Do you think this hospital has adequate qualified health practitioners?	1. Yes 2. No		

Section: 4 satisfaction level of CBHI members						
		1. Strongly Disagree	2. Disagree	3. Neutral	4. Agree	5. Strongly Agree
401	Opening hours of CBHI office at this Hospital is suitable to get service					
402	The gap between dispensing of insurance cards and making use of cards to get health service is appropriate					
403	Fee payment time for membership is suitable					
404	The CBHI management is trust worthy					
405	Enough information is provided about CBHI					
406	The service package provided is enough					
407	Happy with the facilities in deal with the scheme and giving service(line of referral)					
408	Extra fee you paid from your pocket for service, medication or investigations which are not available					
409	Availability of means whereby the community can voice the claims on bad services					
410	Recommend others to be a member of CBHI					

Annex III: Consent (Afan Oromo Version)

Guuca Oddeeffannoo Hirmaattootaaf fi waligaltee Hirmaannaa (Afan Oromo version)

Maqaan koo _____ jedhama

Ani ga'een hojii kotii oddeeffannoo qorannoof hirmaattoota irraa fudhachuu dha. Qorannoon kun kan qooratamu yunivarsitii Arsii, Kolleejjii fayyaa fi wal'ansaattii kutaa barnoota Dhiibee keessoottiin, qorannoo xuumura barnoota ispeeshaalitii dhukkuba kessootiif adeemsiifamu dha. Qorannoo kana kan qorachaa jiru Dr. Wandwasan Mulaatuu dha. Sababa isiin qorannoo kanaf filatamtaniif fi waa'ee qorannichaa isiinif ibsuun barbaada.

Maqaa Qorannoo: Sadarkaa ittiin quufinsa fi sababoota isaan walqabatan miseensota inshuraansii fayyaa hawaasaa hospitaala rifaraalaa fi barnoota Asallaa

Kaayyoo Qorannoo: Bu'aan qorannoo kana irraa argamuu foyya'insa tajaajila fayyaa. hospitaala rifaraalaa fi barnoota Asallaatiif guumaacha buusn jedhame yaadama

Haala fi Yeroo Qorannoo: Af- gaaffii as keessattii gaafatamtan daqiiqaa 20 caala hinfudhatan waan ta'ef obsaan akka hirmaatan isiin gaafadha

Miidhaa fi Faayidaa: Qorannoo kana keessatti hirmaachuun kessaniif miidhaa isiin irra ga'u tokkoleen hin jiraatu.

Eegama Iccitummaa (Confidentiality): Odeeffannoo isiniin nuuf kennitu iccitiin isaa sirriitti eegama dha. Maqaa keessan kan mul'isu hin jiraatu. Bu'aan qorannoo kana irraa argamu namoota hirmaatan hundaaf kan shallagamuu yoo ta'u, nama tokkorratti kan hin xiyyeeffannee dha. Maqaan hirmaattootaas hin ibsamu.

Mirgoota Hirmatoota: Qorannoo kana keessatti hirmaachuun mirga keessan waan ta'eef, hirmaachuu ykn hirmaachuu dhiisuu dandessu. Yoo yaada kessan gidduutti jijjirrattan irraa deebi'uu danda'assu; kana waan gootaniifis mirga tajaajila fayyaa argachuu keessan irratti ga'u hin jiraatu. Gaaffilee kamillee yoo hin feenee dhiisuu danda'assuu.

Tumsi keessanii fi deebiin keessan qorannoo hojjatamuuf galtee guuddaa nuuf ta'udhaan milkaa'ina qorannoo kanaaf guddaa nuu gargaara

Teessoo : Yoo gaaffilee qorannoo kanaan walqabatan ykn haala isaa irratti qabaattan, teessoo armaan gaditiin nu qunnamuu dandeessuu:

- Dr. Wondwosen Mulatu: Lakkoofsa Bilbila (+251)-910-994877

- Email: wondiemek04@gmail.com

Mirkaneessa waliigaltee Hirmaannaa

Ani hirmaataan qorannoo kanaa yo ta'u waa'ee kaayyoo qorannicha, haala ittiin geggeeffamuu, miidhaa fi faayidaa isaa, iccitii hirmaataa, mirga hirmaachuu fi hirmaachu dhabuu hubadheera. Gaaffilee hin hubannees hubachuuf gaafachu akkan danda'u u naaf ibsameera. Yeroo kamillee qorannoo kana dhiisuu ykn gaaffilee kamillee yoo hin feenee dhiisuu akkan danda'us hubadheera. Kanaafuu, qorannoo kanattii hirmaachuuf feedhii qabaachu koon isiiniif mirkaneessa.

Galatoomaa!

Annex: Questionnaire (Afan Oromo Version)

Lakk	Gaafannoo	Deebii	darbii	
Kutaa: 1^{ffaa} - Gaaffiilee odeeffannoo dhunfaa, hawaasummaa fi dimoogiraafii				
101	Umriin kessan Haagami?	Waggaa _____ (umrii ammaa waggaadhan)		
102	Saallii kessan maali?	1. Dhiira 2. Dubara		
103	Yeeroo amma haallii gaa'ela kessan?	1. Hin funee/heerumne 2. Kan fudhee/heerumte 3. Addaan kan bahee/baatee 4. Kan irraa du'ee/tee		
104	Baay'innii miseensa maatii kessan meeqa?	_____		
105	Amantaan kessan maali?	1. Ortodoksii 2. Musliima 3. Pirotestaantiit 4. Kaatolikii 5. Kan biroo (haa ibsamu) (_____)		
106	Sadarkaan barnoota Kessani?	1. Kan hin barannee 2. Dubbisu fi barresu kan danda'u/ssu 3. Sadarkaa tokkooffaa 4. Sadarkaa Lammaffaa 5. Dipilomaa 6. Digrii fi isaa ol		
107	Hojiin kessan maali?	1. Qoonna 2. Hojii dhunfaa 3. Dhaabbata Dhunfaattii 4. Kan motummaa 5. Kan biroo (haa ibsamu)		
108	Iddoon jireenya kessanii eessa?	1. Magaalaa 2. Baadiyyaa		

Kutaa: 2^{ffaa} Gaaffilee tuurtii , adeemsa fi hojiimaata inshuuraansii fayyaa hawaasaatiin

Walqabatan

201	Sagantaa Inshuraansii fayyaa hawaasa kessattii haangam tuurtan?	Waggaa _____		
202	Fageenyii iddoon jireenya keessanii hospitaala kanarraa haammam ta'a? konkolaataan	1. Asuuma magaalaa kessa 2. Sa'ati 1 gadii 3. Sa'ati 2 – 4 4. Sa'ati 4 -6 5. Sa'ati 6 ol		
203	Yeeroo baniinsa kutaa inshuraansitiin gammachu qabdu?	1. Eyyeen 2. Lakkii		
204	Tajaajiila fayyaatiif hospitaala kannattii,yeeroo meeqa dhuftan?	_____		
205	Miseensummaa Inshuuraansii fayyaa haaromsuuf karoora qabdu?	1. Eyyeen 2. Lakkii		
206	Walgahii waa'ee inshuuraansii fayyaa irratti hirmaatanii beeytuu?	1. Eyyeen 2. Lakkii		
207	Namnii miseensa maatii hin taanee tajaajila fayyaa inshuuraansiitiin argachuu nidanda'a?	1. Eyyeen 2. Lakkii		
208	Yeeroo miseensummaa inshuuraansii fayyaa haaromsuu barbaaddan kafaltiin miseensummaa ni kaffalamaa?	1. Eyyeen 2. Lakkii		
209	Miiseensii Inshuuraansii fayyaa tokkoo bara darbee keessattii yoo tajaajila fayyaa hin fayyadamnee kaffaltii baranaa kaffaluu qabaa?	1. Eyyeen 2. Lakkii		
210	Fuladuratiif hospitaala kana tajaajila fayyaatiif nii filattuu?	1. Eyyeen 2. Lakkii		

Kutaa: 3^{ffaa} Gaaffilee tajaajiloota fayyaa waliin wal qabatan				
301	Hospitaalli kun qulqullu dha jettanii amantuu?	1. Eyyeen 2. Lakkii		
302	Yeeroo hospitaala kanattii tajaajila fayyaa ofiif ykn maatii keessaniif dhuuftan qoorichoota ajajaman hunda nii argattu?	1. Eyyeen 2. Lakkii		
303	Yeeroo hospitaala kanattii tajaajila fayyaa ofiif ykn maatii keessaniif dhuuftan qoorannaa laaboraatoorii ajajaman hunda nii argattu?	1. Eyyeen 2. Lakkii		
304	Yeeroo hospitaala kanattii tajaajila fayyaa ofiif ykn maatii keessaniif dhuuftan qorannaa kan akka altiraasaawundii, raajii fi kkf ajajaman nii argattu?	1. Eyyeen 2. Lakkii		
305	Yeeroo hospitaala kanattii tajaajila fayyaa ofiif ykn maatii keessaniif dhuuftan tajaajila fayyaa saffisaan nii argattu?	1. Eyyeen 2. Lakkii		
306	Yeeroo hospitaala kanattii tajaajila fayyaa ofiif ykn maatii keessaniif dhuuftan ogessoonnii tajaajila keennan kabajaan isiin tajaajilu?	1. Eyyeen 2. Lakkii		
307	Ogessoonnii tajaajila keennan akka maatiittii dhiyaatanii isiin tajaajilu?	1. Eyyeen 2. Lakkii		
308	Hospitaallii kun meeshaalee yaalaa ga'a qaba jettanii yaadduo?	1. Eyyeen 2. Lakkii		
309	Hospitaalli kun ogessoota ga'umsa qaban nii qaba jettanii yadduu?	1. Eyyeen 2. Lakkii		

Kutaa: 4 ^{ffaa} Sadarkaa ittiin quufinsa tajaajila fayyaa miseensoota inshuraansii fayyaa hawaasa						
		1. Baayy'ee Gaarii miiti	2. Gaarii miiti	3. Humaa hin jadh	4. Gaarii dha	5. Baayy'ee Gaarii dha
401	Sa'aatiin baniinsa biiroo inshuuraansii fayyaa hospitaala kanaa tajaajila argachuudhaf					
402	Eerga kaardii baafnee booda yeeroo tajaajila fayyaa argachuuf nuttii fudhatu					
403	Yeeroon kaffaltii miseensummaa inshuraansii fayyaa ittii kaffalamuu					
404	Amanammuummaan hojiimaannii inshuuraansii fayyaa hawaasa					
405	Odeffannoon waa'ee inshuuraansii fayyaa hawaasa kennamuu					
406	Tajaajiloonnii fayyaa inshuuraansii fayyaa hawaasa kessattii hammataman					
407	Dhaabatonnii (buufatonnii) tajaajila fayyaa isiiniif kennaa jiirani fi riifarii isaanii					
408	Tajaajiloota askessatti hinargamneef (qoricha, laaboratorii) baasii dabalataa baasuun kiyya					
409	Tajaajila fayyaarrattii yoo rakkon isiin muudatee iddoo ykn haallii koomii ittii dhiyeefattan					
410	Maatiin biiroo miiseensa inshuuraansii fayyaa hawaasa akka ta'aniif maal jettu?					

Annex IV: Consent (Amharic Version)

ለተሳታፊዎች ስለጥናቱ መረጃ እና የስምምነት ቅጽ (Amharic Version)

እኔ _____ እባላለሁ። በአርሲ ዩኒቨርሲቲ ጤና ሳይንስ እና ሕክምና ኮሌጅ፣ በወሰን ደዌ ሕክምና ትምህርት ክፍል፣ የወሰን ደዌ ስፔሻሊቲ ትምህርታቸውን እየተከታተሉ የሚገኙት ዶ/ር ወንድሰን ሙላቱ ለሚሰሩት የመመረቂያ ጥናት እኔ የመረጃ ሰበሰቢ ነኝ። እርስዎ በዚህ ጥናት ላይ ለመሳተፍ ፈቃደኛ ከሆኑ እንድትሳተፉ የተመረጡበትን ምክንያት እና ጥናቱን በተመለከተ ለመተንተን ፈቃድዎን እንዲሰጡኝ እጠይቃለሁ።

የጥናቱ ርዕስ: በአሰላ ሪፈራል እና የትምህርት ሆስፒታል ውስጥ በማህበረሰብ የጤና መድሃኒት የታቀዱ ደንበኞች የዕርካታ ደረጃ እና ተዛማጅ ምክንያቶች

የጥናቱ ዓላማ: የዚህ ጥናት ውጤቶች በአሰላ ሪፈራል እና የትምህርት ሆስፒታል የጤና አገልግሎት በሚያገኙት በማህበረሰብ አቀፍ የጤና መድሃኒት አባላት የተለዩ የአገልግሎት ክፍተቶችን ለማሻሻል በጣም አስፈላጊ ሊሆኑ ይችላሉ።

ሂደት እና ጊዜ: የመጠይቁ ጥያቄዎች በተሰለጠኑ ነርሶች ይቀርብሎታል። ይህ መጠይቅ እስከ 20 ደቂቃ ሊወስድ ይችላል።

አደጋዎች እና ጥቅሞች: በዚህ ጥናት ውስጥ መሳተፍዎ ምንም ዓይነት አሉታዊ ትጽዕኖ አይኖረውም።

ሚስጥራዊነት: የሚሰጡን መረጃ ሚስጥራዊ እንደሚሆን ቃል እንገባለታለን። የእርስዎን ማንነት የሚገልጽ ምንም መረጃ ልማንም ይፋ አይሆንም። የጥናቱ ውጤት በጥናቱ የተሳተፉትን ተሳታፊዎች አጠቃላይ ወጤት እንጂ የግለሰብ መረጃን አያንፀባርቅም። የጥያቄ ወረቀቱ ስሞችን ሳያካትት በኮድ ይሰጣል። በአፍ ወይም በጽሑፍ ሪፖርቶች ውስጥ ተሳታፊዎችን ከጥናቱ ጋር የሚያገናኝ ምንም ማጣቀሻ አይኖርም።

መብቶች: በዚህ ጥናት ውስጥ መሳተፍ በፈቃደኛ ነው። በጥናቱ ውስጥ የመሳተፍ ወይም ያለመሳተፍ መብት አለዎት። ላለመሳተፍ ከወሰኑ በማንኛውም ጊዜ መጠይቁን ሊያቋርጡ ይችላሉ፤ እና ይህ ምንም ዓይነት አሉታዊ ትጽዕኖ አያስከትልበትም።

የእርስዎ በመጠይቁ መሳተፍ ይህን ጥናት የተሳካ ያደርግልናል ብለን እናስባለን።

የመገኛ አድራሻ: ስለ ጥናቱ ወይም ሂደቱ ጥያቄዎች ካሎት በሚከተሉት አድራሻዎች ያገኙናል፤

- ዶ/ር ወንድሰን ሙላቱ: ስልክ ቁጥር (+251)-910-994877

- የኢሜይል አድራሻ: wondiemek04@gmail.com

በጥናቱ ለመሳተፍ የስምምነት ቅጽ

የጥናቱ መረጃ ወረቀት የተነበበልኝ (ያነበብኩ) ሲሆን። የጥናቱን ዓላማ፣ ሂደት፣ አሉታዊ ትጽዕኖ እና ጥቅሞች፣ ሚስጥራዊነቱም እንደሚጠበቅ ተገልጾልኛል። መሳተፍ መብቴምሆኑን እና ግልፅ ያልሆኑልኝን ጥያቄዎች ለመጠየቅ አድራሻውም ተገልጾልኛል። በማንኛውም ጊዜ መጠይቁን መቆም እንደምችል ወይም የማልፈልገው ጥያቄ ካለ ያለመመለስ መብት እንዳለኝም ተነግሮኛል። ስለዚህ ፍቃደኛ ስለሆንኩ ጥያቄዎቼን ለመመለስ ተስማምቻለሁ።

አመሰግናለሁ!

Annex: Questionnaire (Amharic Version)

ተ ቁ	ጥያቄ	መልስ	ይዘለል	
ክፍል: 1 ግላዊ ማሕበራዊና ዲሞክራሲያዊ ሁኔታዎች				
101	ዕድሜዎት ስንት ነው?	_____ ዓመት		
102	ፆታዎት?	1. ወንድ 2. ሴት		
103	በአሁኑ ሰዓት የጋብቻ ሁኔታ?	1. ያላገባ/ች 2. ያገባ/ች 3. የተለያየ/ዮች 4. የሞተበት/ባት		
104	የቤተሰብ አባላት ብዛት?	_____ አባላት		
105	የሚከተሉት ሐይማኖት ምንድን ነው?	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ካቶሊክ 5. ሌላ ይጠቀስ (_____)		
106	የትምህርት ደረጃዎ?	1. ያልተማረ 2. ማንበብና መጻፍ የሚችል/ትችል 3. የመጀመሪያ ደረጃ 4. የሁለተኛ ደረጃ 5. ዲፕሎማ 6. ዲግሪና ከዚያ በላይ		
107	የስራዎ ዓይነት?	1. ግብርና 2. የግል ስራ 3. በግል ድርጅት ተቀጣሪ 4. የመንግስት ተቀጣሪ 5. ሌላ ይጠቀስ _____		
108	የመኖሪያ አድራሻዎ?	1. ከተማ 2. ገጠር		

ክፍል: 2 የማሕበረሰብ አቀፍ ጤና መድሃኒት ልምድ ፣ ሒደት እና አስተዳደርን የሚመለከቱ ጥያቄዎች

201	በጤና መድሃኒት ስር ከተካተቱ ምን ያህል ጊዜ ሆኖት?	_____ ዓመት		
202	የመኖርያ ስፍራዎ ከዚህ ሆስፒታል ምን ያህል ይርቃል?	1. < 1 ሠ በተሸከርካሪ 2. 1 -2 ሠ 3. 2 -4 ሠ 4. 4 -6 ሠ 5. > 6 ሠ		
203	የጤና መድሃኒት ቢሮ ለአገልግሎት የሚከፈትበት ሰዓት ያስደስቶታል?	1. አዎ 2. አይ		
204	የጤና አገልግሎት ለማግኘት ወደዚህ ሆስፒታል ምን ያህል ጊዜ መተዋል?	_____		
205	የጤና መድሃኒት አባልነቱን ለማደስ ዕቅድ አለህ?	1. አዎ 2. አይ		
206	የጤና መድሃኒትን በተመለከተ ስብሰባ ላይ ተሳትፈው ያዉቃሉ?	1. አዎ 2. አይ		
207	የቤተሰብ አባል ያልሆነ ግለሰብ በእርሶ የጤና መድሃኒት ስር ሊካተት ይችላል?	1. አዎ 2. አይ		
208	የጤና መድሃኒት አባልነቱን ሲያድሱ የአባልነት ክፍያ ሁሌ ይከፍላሉ?	1. አዎ 2. አይ		
209	ባለፈው ዓመት ምንም ዓይነት የጤና አገልግሎትን ካልተጠቀሙ ለዘንድሮ መክፈል ይጠበቅቦታል?	1. አዎ 2. አይ		
210	ወደፊት የጤና አገልግሎትን ለማግኘት ይህን ሆስፒታል ይመርጡታል?	1. አዎ 2. አይ		

ክፍል: 3 ከጤና አገልግሎት ጋር የተያያዙ ጥያቄዎች				
301	ይህ ሆስፒታል ንጽሕና አለው ብለው ያስባሉ?	1. አዎ 2. አይ		
302	ወደዚህ ሆስፒታል ለአገልግሎት መጥተው ለእርሶ ወይም ለቤተሰብ አባል የታዘዙሎትን መድሐኒቶች ሁሉ ከዚህ ያገኛሉ?	1. አዎ 2. አይ		
303	ወደዚህ ሆስፒታል ለአገልግሎት መጥተው ለእርሶ ወይም ለቤተሰብ አባል የታዘዙሎትን የላቦራቶሪ ምርመራዎች ሁሉ ከዚህ ያገኛሉ?	1. አዎ 2. አይ		
304	ወደዚህ ሆስፒታል ለአገልግሎት መጥተው ለእርሶ ወይም ለቤተሰብ አባል የታዘዙሎትን የአልትራ ሳውንድ፣ ራጅና ሌሎች ምርመራዎችን ሁሉ ከዚህ ያገኛሉ?	1. አዎ 2. አይ		
305	ወደዚህ ሆስፒታል ለአገልግሎት በሚመጡበት ጊዜ የታፋጠነ አገልግሎት ያገኛሉ?	1. አዎ 2. አይ		
306	በዚህ ሆስፒታል ሲገለገሉ አገልግሎት ሰጪዎቹ በክብር ነው የሚያገለግሏቸው?	1. አዎ 2. አይ		
307	በዚህ ሆስፒታል ሲገለገሉ አገልግሎት ሰጪዎቹ እንደቤተሰብ ነው የሚያገለግሏቸው?	1. አዎ 2. አይ		
308	ይህ ሆስፒታል በቂ የሆኑ የሕክምና መሳሪያዎች አሉት ብለው ያምናሉ?	1. አዎ 2. አይ		
309	ይህ ሆስፒታል ብቁ የሆኑ የሕክምና ባለሙያዎች አሉት ብለው ያምናሉ?	1. አዎ 2. አይ		

ክፍል: 4 የጤና መድሃኒ አባላት እርካታ መለኪያ ጥያቄዎች						
		1. በጣም አልስማማም	2. አልስማማም	3. ምንም አይልም	4. እስማማለሁ	5. በጣም እስማማለሁ
401	የጤና መድሃኒ ቢሮ የሚከፈሉበት ሰዓት አገልግሎትን ለማግኘት ምቹ ነው					
402	የአገልግሎት ፋይሌን ካወጣሁ በኋላ የመጣሁበትን አገልግሎት ወዲያውኑ አገኛለሁ					
403	የጤና መድሃኒ አባልነት መክፈያ ጊዜው ምቹ ነው					
404	የጤና መድሃኒ እምነት የሚጣልበት ነው					
405	ስለ ጤና መድሃኒ በቂ መረጃ ተሰጥቶኛል					
406	በጤና መድሃኒ ስር የተካተቱት አገልግሎቶች በቂ ናቸው					
407	በጤና መድሃኒ አገልግሎት በሚሰጡት ተቋማትና የሪፈራል አሰራራቸው ደስተኛ ነኝ					
408	ለጤና አገልግሎት፣ ለመድሃኒት እና ምርመራ እዚህ ባለመኖራቸው ከኪሴ በማወጣው ወጪ					
409	በጤና አገልግሎት ጊዜ ለሚያጋጥሙኝ ተግዳሮቶች የማመለከትበት መንገድ/አካል አለ					
410	ሌሎችም እንደኔ የጤና መድሃኒ አባል እንዲሆኑ እመክራለሁ					

Annex V: DECLARATIONS

DECLARATION INVESTIGATOR

I undersigned resident, declare that this thesis is my original work, has never been conducted in the study area, and that all the resources and materials used for the research have been duly acknowledged.

Investigator: _____

Signature _____

Date _____

Date of submission _____

DECLARATION ADVISORS

We the undersigned Advisors declare that this research is our original work in partial fulfillment of the requirement for a specialty certificate in internal medicine for the above resident to our best knowledge. We confirmed that this thesis is ready for defense with our approval as the university advisors.

1. Name of primary advisor

Dr. Mulugeta Solomon (M.D, Assistant professor of internal medicine)

Date _____

Signature _____

2. Name of secondary Advisor

Mr. Abdurehman Kalu ((BSc, MPH, Assistant Professor)

Date **1/22/2026**

Signature



Department Head

Dr. Wubshet Abraham (M.D, Assistant professor of internal medicine)

Date _____

Signature _____